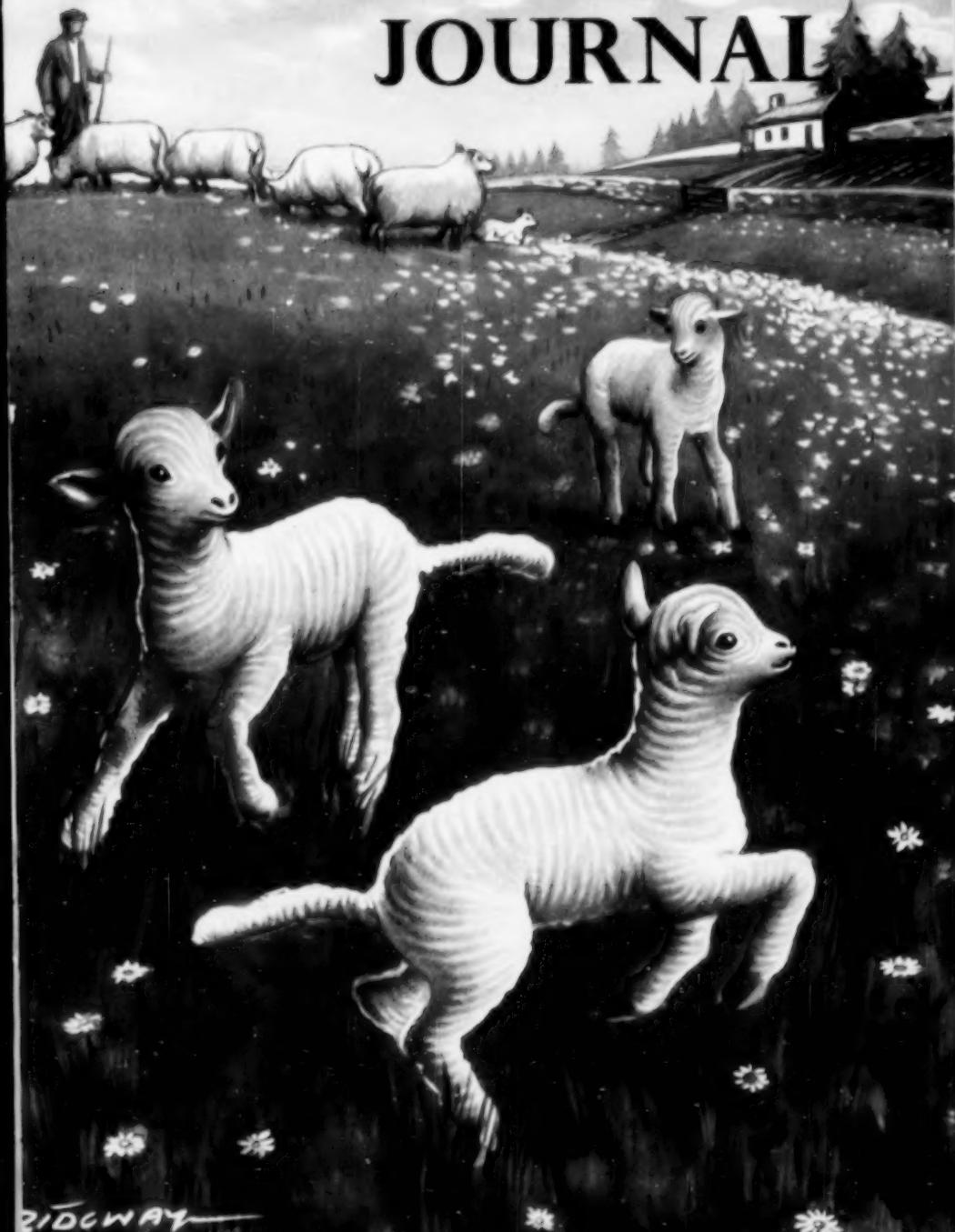


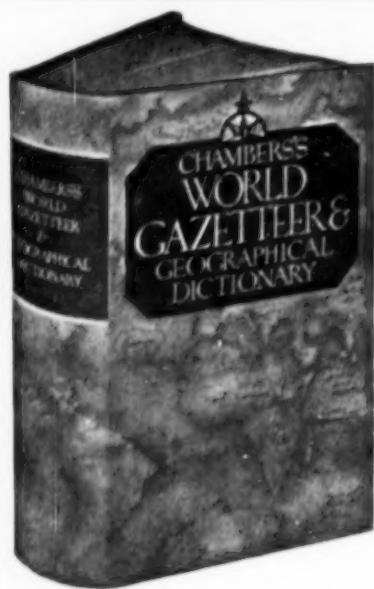
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Contents—March 1955

| | PAGE |
|---|---------------------------|
| STRAW IN THE WIND | Jim Phelan 129 |
| GROWTH INHIBITION FOR THE GARDENER | E. R. Webber 133 |
| YOUTH (Poem) | Vivian Henderson 135 |
| THE AMISH | Orma Dale 136 |
| THE TIDE OF SPRING (Poem) | M. G. Hull 138 |
| CROCODILE BAIT | Ivan Cameron 139 |
| HEALING WINGS: Australia's Flying Doctor Service | E. M. Arteta 143 |
| THE COLE-BALLE KNIGHT: | |
| Sir Hugh Plat and his Ingenious Inventions | Elizabeth Walsh 146 |
| A HOUSEMASTER'S CASE-BOOK: IX.—Sidney Mariner | Everett Barnes 149 |
| SILVER GREYHOUNDS: The Corps of Queen's Messengers | A. T. Henly 155 |
| MARCH (Poem) | Elizabeth Fleming 156 |
| A WATER-GIPSY IN THE PACIFIC | R. N. Stewart 157 |
| A DAY OFF | Betty Singleton 161 |
| TWO PRIDES (Poem) | Charles Kellie 164 |
| THE INSECT STORY | D. A. Tidman 165 |
| THE NATIONAL FILM THEATRE | David Gunston 168 |
| BLACK GIRL IN TRAIN (Poem) | Odette Tchernine 170 |
| ANATOMY OF 'CORESCA' | James Hanley 171 |
| THE LITTLE THINGS (Poem) | Joan Pomfret 176 |
| PROTECTING THE FISHERIES | John Maurice 177 |
| TWICE-TOLD TALES: LI.—England and the English by a Chinese | 179 |
| FAINT HEART | Thomas Kelly 180 |
| REFLECTION (Poem) | Hazel Townson 184 |
| ORGAN-PIPES ARE ALMOST HUMAN | Clifton E. Williamson 185 |
| RAIN SACRIFICE | Charles C. Tallack 187 |
| THE CLOCK (Poem) | T. Stephanides 188 |
| SCIENCE AT YOUR SERVICE—An Interior Paint. A Switching-off Electric-Kettle. | |
| Better Divider Measuring. Sound-Wave Washing. Self-Lighting Cars. A Modern | |
| Coal-Scuttle. Nylon Screws. A Shop-Window Demister. Easier Telephoning. A | |
| New Vitamin C Source. | 189 |
| MARCH TASKS | W. E. Shewell-Cooper 192 |

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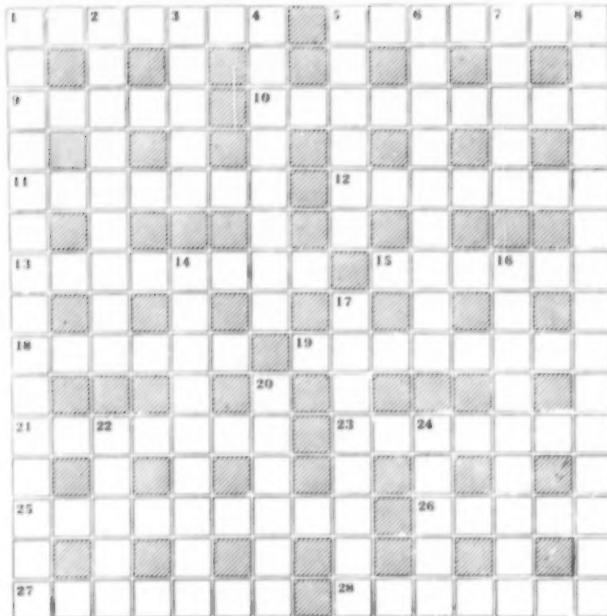
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ACROSS

- Hot, wordy barrage? (own words: 3,4).
- An Imperialist, of course (7).
- Part of the head in two directions approaches (5).
- Divided, might be alternative name for monocle. Of course it relates to sight (9).
- May have weighty connections and wallows (7).
- Thread-like shoot; sounds like a few recurses on the parade ground (7).
- Community, which might be H.M.S. *Calcutta*, or H.M.S. *Birmingham* (8).
- Just a matter of pin-pricks, but not ill-military (6).
- Stop the rope slipping through the hole (6).
- He watches players at work (5).
- Formerly enough, this pattern (7).
- You couldn't remember having this (7).
- In adipose tissue you consumed, so turn to folly (9).
- Bump into boat (5).
- Five hundred young eels dig away (7).
- Cot in costume to overlook paper (7).



Composed by JOAN BENYON

16

DOWN

- Departed with half the orchestra, in great volume (4 words: 4,4,3,4).
- Scientific friend with joker—the good-for-nothing! (9).
- Is a girl put in circulation? (5).
- Describes the importance of being Number One (8).
- Yet tin is a living (6).
- Relating to the root of all evil (9).
- 7 down is this (3).
- 15 across may be seen at this princely combat (two words: 5,10).

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CHAMBERS'S DICTIONARY CROSSWORD No. 10 (February)

SOLUTION

Across: 1, Debutante; 6, Paste; 9, Athirst; 10, Uncouth; 11, Turbulent; 13, Semi; 15, Trembles; 17, China; 19, Lurid; 20, Needless; 22, Tote; 23, Solitaire; 26, Nonsuch; 28, Turbine; 29, Meaty; 30, Modulator.

Down: 1, Dearth; 2, Behar; 3, Torquemada; 4, Netherlands; 5, Emu; 6, Pick; 7, Souvenirs; 8, Ethnical; 12, Tessellated; 14, Sculptural; 16, Ruritania; 18, Platinum; 21, Veneer; 24, Idiot; 25, Judy; 27, Ham.



Straw in the Wind

JIM PHELAN

WHAT a shock I had, one morning when I found I'd forgotten my mate's name. My own mate! Funny, eh? Twelve years we'd been drifting around, just going places, often separated, but always coming together again. Then to forget his name. With him not six feet away, at the same lodging-house table, having his breakfast. Funny.

We'd met first in the stokehold of a dirty little coasting-steamer out of Waterford in Ireland and bound for Glasgow. I didn't belong to her, was just working my passage because I wanted to get to Scotland.

Her skipper was a skinflint—working your passage with him meant *working* your passage. So there I was, shovelling coal, feeling as if my heart's blood was running away in sweat, and knowing I'd paid my fare a dozen times over, in shovel-slugging.

I was just about ready for a life-sized row when they sent down another fireman. Working a passage he was, too. Sly enough—they'd saved him until I'd be worn out. A skinflint that skipper was.

That's not quite what my mate and I called him, next evening in Glasgow, as soon as we were safely on the quayside. The second

passage-worker was my mate. He wasn't going anywhere in particular, no more than I was. Just a drifter, a tramp like myself, he kept moving on, working a little at times, but mostly moving. Plain drifter, the same as me.

Right from the first minute we took to one another. That first morning, when we'd walked out to the edge of Glasgow, we stopped at the crossroads gossiping for an hour. I was going to Edinburgh, and he was going to Ayr—at least that's where we reckoned we were going—and the roads split just beyond the city.

More like a pair of schoolboys we were, instead of two six-foot tramps. An hour by the sun we stood and yarnted, about nothing at all. Then in the long run we both changed our plans, and we went on together to High Bonnybridge.

As far as I can make out, the only possible reason for our going on to High Bonnybridge was that it kept us on the same road for a day or two. We talked about working in the big brickfields there, but down at bottom it was only an excuse to keep together. That's the kind of mates we were.

CHAMBERS'S JOURNAL

It seems funny to say it, and no one but a tramp will understand, but sheer laziness and very little else kept us working for weeks in the Bonnybridge brickworks. We weren't going anywhere, we didn't want to do anything, and we liked one another; so we stuck around and worked in the brickfields.

Six weeks we stayed—six paydays; and the morning we left one big tough ganger had the shock of his life. Well, a navvy-ganger had to be tough, in those days, nearly thirty years ago. But that ganger had reckoned only one of us would quit—besides counting that it was fairly safe to pick on me.

I'd hurt my right hand two days earlier, and it was hanging loosely, my mate doing most of my work as well as his own, using shovel as well as pick. If you've ever watched two navvies at work, one resting while the second picks, then the second resting while the first one shovels, you'll see the kind of mates we were.

Of course, in the ordinary way that ganger wouldn't have been such a fool as to pick on a fellow like me. But my right hand was smashed up a good deal, and he knew. So he got nasty. Chucked words about, then chucked his weight about, then like a simpleton hauled off to slug me.

So that was the end of our High Bonnybridge job. My mate went through that navvy-ganger like a jet of steam in a snowdrift. Best part of six weeks' wages we had, each, so of course we weren't sorry to see the last of the brickfield.

WE stayed in Carlisle until we were broke. Tramps don't go anywhere when they have money. Unless—well, I suppose a tramp who had regular money could just keep going on and on. I don't know. Tramps don't *have* regular money, anyway. We stayed in Carlisle.

The morning we left Carlisle, where the road forked, we stood and yarnted the same kind of kid-gossip like we'd done outside Glasgow. I had an idea of going over to Newcastle or one of the Tyne ports, because I'd heard the boats for Sweden and such places went out from there.

My mate was headed for Barrow-in-Furness, but I'd been to Barrow—and what was the use of going again? So we split off, grinnéd and said so long, and I headed off for the East Coast, while he kept straight on

towards Lancashire and Barrow. It was over three years before I saw him again.

I'd been here and there, just drifting a long time. Then I met a Yank in Marseilles who said there was going to be a pipeline made, up from Le Havre to Paris way, by an American company. French labour mostly, he thought, but there would be plenty of Americans as well, and of course a few Scots and Irish.

So I sniggéd myself out of Marseilles pretty quickly, as you may think. Then three days later I was on the pipeline job, a few kilometres from Le Havre. It was no surprise at all to run into my mate, on the very first day. The fact is, I'd had that very idea in mind. It was the kind of place you'd find him, and there he was—having turned up to see was I there!

We worked together from the start, and anyone who listened to our gossiping would have thought we were weak-minded. But we weren't. Just two tramps who liked one another—that was us.

The sun was getting strong, and the grapes were nearly ripe, when we decided, almost at the same minute, that we could no longer endure such treatment. Something about the food it was—but, of course, any excuse would have served.

The foreman knocked my mate cold in the row. He nearly knocked me cold, too, but I managed to get one in on him, so there we were, out on the road again and no job. Good money, though. It lasted nearly a month.

We didn't feel like splitting up that time, and we went to work for a French farmer. The pay wasn't much, but we knew we weren't staying, and didn't care. Often at night, liking the cheap red wine, we'd laugh and say that if only we had this few francs every week, without having to stay in one place, we'd be kings. But that's the snag about having regular money. People want you to work for it, and that means staying in one place. So a tramp never has any.

The French farm was nice, and so were the people, but, of course, we soon quit, and drifted our way down to Toulon. My mate was for going somewhere in Africa, but I thought about Italy myself. So that time it looked as if our paths wouldn't be crossing any more.

THEY did, though. Back in England at the tail-end of the first big war, I found

STRAW IN THE WIND

myself of all places in the world on a mine-sweeper. And there was my mate, with a few weeks' service on the same boat. Talk about the long-lost brother, the Prodigal Son, and all the rest! No relatives in the world ever made such a fuss of one another as we did.

The money was good there—of course with the chance of being blown sky-high any minute. Not that we cared about the danger. Nor about the money either; it never counted for much with my mate or myself. The simple fact was that we liked being together, even on a trawler fishing for live mines!

That spell didn't last long, though. I got drunk in Grimsby one night, and missed the mine-sweeper, with my mate on her. So there I was, a deserter no less. But the war ended soon, and there was no harm done.

I went here and there for a bit, and fetched up in Glasgow a couple of years later—casual dock-labourer by description. It meant working down in the hold of a timber-ship, making ready the big slings of timber for the crane to haul out.

Casual labour was the right word. Because on the second morning another casual came down into the hold, looking around as if he expected someone. My mate again.

He'd been to Australia and back since the war, besides tramping up and down Britain, and just then he'd walked over from Aberdeen—right to the quayside where I was working.

It made us both feel partly frightened and partly religious. That's the way we put it. One thing was pretty plain—we were never going to be split up again. There can't be many pairs of mates like that.

His coming put me on to an easier job, out on the dockside instead of down in the ship's hold. I was made sing-out man. This is just a man who signals to the crane-driver, when the big slings of timber are going up and down. It doesn't look much of a job, but in fact the sing-out man carries all the limbs and lives of the gang in his hand. This is because the craneman is away aloft, to one side, and can't see where the loads are going to or coming from. He can only see and hear the sing-out man. Six ton or more those slings of timber went, some of them as big as a small cottage. So the sing-out man had to be all alert, I can tell you. That's why I was put on the job; I was always quick on the uptake.

Good job I was, too. Halfway in the third day my mate had come up on to the quayside,

and started across to speak to me. Right into the open space, with one of those timber-slings coming down—from heaven you'd think, the crane took them so far aloft on their way out.

There was my mate walking under it, and I just ready to make the down-sweep of my right hand that would tell the craneman to let her come. He laughed for a minute at the funny juggling I did with my hands, and then we laughed together when he saw that my hand-juggling had sent that six ton of timber swinging away into safety, instead of cracking him like a black-beetle.

I knew what he'd come for before he spoke. There was that innocent kind of genuine-grievance look in his eyes that always tells when a drifter feels inclined to go drifting some more. So I got my coat and hat and we went for our few days' pay.

LAZING around in Glasgow was pleasant, but we had very little money. We stayed in a big lodging-house while the few pounds lasted, and were just about ready to move off when this luck of ours came along.

A fellow in the lodging-house had been in the mine-sweeping service a few years earlier, the same as us. Now there he was with a pension. A pension! Money for just drifting! We shot round to an office, to commence inquiries, as fast as two prospectors who'd heard of a new goldfield.

It was only after we'd studied the first lot of forms that we realised I was out of it. I'd spoiled myself by missing the mine-sweeper that time. No easy money for me. But we reckoned my mate was all right, and we started to chase the forms and certificates and records, to get that money-for-nothing if it could be got.

It meant staying in Glasgow for a while, so I scrounged around a few friends and shook the necessary out of them. It went against the grain a bit, but we had to be in one place, and have an address, while the papers and formalities were going through. We managed, with a bit of a struggle, and at last the thing was fixed.

Two pounds a week. That's what my mate was to get, on account of his having been slightly wounded. Two pounds a week!

Needless to say, this looked like Golconda and El Dorado and all the rest combined—to us. No pair of tramps in the world, as far as

CHAMBERS'S JOURNAL

I know, had ever had two pounds a week between them before. Not real drifters—no. If a tramp had ten bob a week, or even five bob a week, he'd be in clover, I tell you. Now here we were with two pounds. It may sound a small sum, but no millionaire on the Riviera ever had such a good time as we were going to have. I knew that.

My mate knew it, too. In the days before the first payment was due, he often laughed with me about our opulent plans. I don't know what we *didn't* plan to do, with that money. Regular money, coming and coming, no matter where you drifted. Why, the very thought of it was enough to make two tramps drunk, without any liquor at all.

Then the last night came, and the next day was to be the first payday. Going up to bed, we decided that we'd stay in Glasgow for a few days, and then move on. Liverpool, I thought, at first, but my mate must have had a nasty patch in Liverpool some time, for he flared up immediately and we decided against it.

Not that it mattered. But I felt angry with myself for trying to have it all my own way. Because it was pretty plain I'd done it all wrong by mentioning Liverpool, from the way my mate glared and looked sideways. I guessed something thoroughly unpleasant must have happened to him there, so I just laughed and said the world was wide.

After a second he laughed, too, and the thing was done with. But the look in his eyes had been funny, like I hadn't seen anywhere before, and I was glad when we got back to yarning over old times.

NEXT morning we were about early, and both in top form. No more talk of Liverpool, I *needn't* say. There was one funny thing happened, while we were at breakfast. Nothing wrong, or unpleasant, or anything like that. Just funny.

Something about a newspaper it was. I'd made some joking remark about the newspaper on the table, and in a second we were at it hammer and tongs, my mate glaring murder at me and contradicting everything I said. Then we laughed, because neither of us knew the first thing about the newspaper in question, anyway. Not a thing.

It was just afterwards that I had the shock. Asking my mate to pass the pepper, I found I'd forgotten his name. Forgotten his name—

with him sitting at the same table! I didn't say anything about it, though. Somehow I thought it wouldn't do. But I still couldn't think of his name, when we'd finished our breakfast and gone walking in Glasgow. Not a bit of it.

It was only about eight o'clock, and the office for the money wouldn't be open until ten, so we just walked along, down by the river. We passed the bridges, and went on the quayside where the ships were, taking it easily and not in any hurry anywhere.

Once I noticed my mate looking from side to side, up the narrow streets, and I pulled his leg, because I thought he was searching for a pub, and they wouldn't be open for hours. Then a bit farther down-river I saw him glance up a lane again, and I pointed, because I supposed it was a lavatory he was after. He stopped short, and for the tiniest split-bit of a second his eyes were strange. It frightened me—no less. The whole thing didn't last as long as while you'd knock the ash off a cigarette, but I'd seen the look, and it frightened me.

I know the bleakness of a bluster-bully's eyes, when you've called his bluff and he knows he's for it. Besides, I've seen the backward glance of an escaping convict when the gun-trailing warders are on his heels, and I've seen the eyes of a trapped traitor, when the boys have called on him at midnight.

A *hunted* look. That was what was in my mate's eyes, that morning on Glasgow riverside. But it went as quickly as it had come, and next minute we were grinning together, as we watched a big timber-ship being unloaded, almost at the same berth where we'd been working a few weeks earlier.

The new sing-out man on the quay remembered us, and shouted some joking remarks about gentlemen of ease, while he waved and twiddled his hands, signalling to the craneman far away aloft. We grinned back, and waited, while a full sling of timber came up from the steamer's hold and swung out across the quay.

I must have slipped in a pool of oil. That would be it. There was a pool of oil, just by the edge of the quay. Down I went, looked like being hurt too, and grabbed my mate's legs to save myself. He made a grab for me as we went down together. Probably trying to save me from getting my clothes all mucked up with the oil. Down he went in front of me, out into the open space.

GROWTH INHIBITION FOR THE GARDENER

That's nearly all. The sing-out man had just made a down-swooping movement of his right arm. Answering it, the sling of timber came whizzing, out of the sky it seemed. Six ton of timber, in a bulk the size of a cottage, dropping down on to that open space.

Cracked like a black-beetle. Finished, the same as when you put your boot down on a worm—squelch.

Bob Flarrrity, my mate. Poor old Bob. I remembered his name, the minute that sling of timber came down.

April First Story: *The Periapt of Braidstanes* by Lewis Spence.

Growth Inhibition for the Gardener

E. R. WEBBER

SHORTAGE of labour and its high cost are bringing about many changes in traditional horticultural practice. The commercial man who must needs cut down on his staff, and the keen amateur who can no longer find a jobbing gardener to help him, both are affected.

Firms and research stations supplying and assisting the horticultural world reflect this trend and the emphasis now is on labour-saving devices of all kinds, from new ways of laying out the garden to the introduction of machinery to make work easier. From the chemical industry comes a development which may be a boon to the hard-pressed gardener.

In 1949 the discovery was made that maleic hydrazide, derived from the rocket fuel hydrazine, possessed the property of being able to retard the growth of most kinds of plants. Its action seems to be a general one, as it affects trees, shrubs, grasses, and weeds of almost all kinds to a greater or lesser extent.

Maleic hydrazide is in no sense a weedkiller, though if applied in excessive quantities it will do damage to plants. In correct dosages it merely retards growth, and, when its effect has worn off, growth begins once again at the normal rate.

Its action on the plant is not yet fully understood. It appears to affect the fundamental

metabolism of all vegetable matter, breaking or splitting the chromosomes in the cells. This breakage is unlike that caused by any other substance studied, in that the breakage occurs in one segment only.

Before going on to the undoubtedly benefits of maleic hydrazide, it is only fair to mention a warning given in 1951 by several eminent scientists to the effect that, as so many chromosome-breaking agents had proved to be cancer-producing, it was hoped that the agricultural use of maleic hydrazide would not be encouraged until suitable tests had been carried out. Since that warning, a great many tests have been conducted, and, although the matter is not so far completely cleared up, there is certainly no positive indication of cancer-producing effects. Because of this uncertainty, however, the use of maleic hydrazide on edible crops is not being recommended yet in this country, although in the United States the Department of Agriculture has given its approval to the chemical being used on potatoes.

Maleic hydrazide, 1,2-dihydropyridazine, 3,6-dione, is now more commonly known as MH and is marketed under various formulations, such as MH 25 per cent and MH 40 per cent. It is absorbed slowly by plants for some 30 hours after application and is trans-

CHAMBERS'S JOURNAL

located downwards during the next 10 to 12 days. Usually applied in the form of spray, it is taken in by the plant surfaces and affects the rate of growth subsequently. The plant becomes more or less dormant, the duration of the dormancy depending on the amount and strength of MH applied. It also depends, to a lesser extent, on the season of treatment, the age of the plant, the subsequent weather, the formulation used, and other factors.

Spray falling on the ground has no effect on later crops or on the micro-organisms of the soil. It is non-poisonous to humans and animals and there is no need for any special clothing to be worn while spraying. It is wise, however, to avoid inhaling the spray drift, and any splashes of the concentrate getting on the skin should be wiped off immediately.

THE suggested applications of MH are many, but it is its use on grass that has attracted most attention. The idea has got around that a lawn sprayed with MH needs no mowing, and the thought fills many not-so-keen gardeners with great joy. In various American gardening journals advertisements have appeared showing a husband in a deck-chair peacefully smoking his pipe while his wife—in the neatest of bikinis—sprays the smooth, beautifully-green lawn with MH.

Things are neither as simple as this, nor are results so perfect. The use of MH on lawns or other areas of fine turf is not recommended at present by either the manufacturers or any responsible bodies in this country. Maybe in the future a formulation suitable for such use will be found, but in the meantime the fact remains that fine turf grasses are easily discoloured or damaged, and, if we are to preserve the lovely green swards for which England is so noted, great care must be taken. But on areas of coarser grass MH is proving very useful. Roadside verges, awkward lawn edges, parts of cemeteries, churchyards and golf-courses, orchards, and so on have all been treated successfully.

The whole object of using this MH on grass is to reduce the necessity for mowing, which is an expensive item both in time and labour. Spring is the best season for the application, and 3 lb. of MH per acre should be put on in early April, followed by a second spraying of the same amount in midsummer. This should control the growth of the grass right through the season. If only one spraying

can be given, a spray of from 4-6 lb. per acre in spring will inhibit growth for from 10 to 14 weeks. Summer sprays are less effective, except where a spring spray has already been given. A spray applied in autumn just before the grass has stopped growing will check growth before the grass enters its normal winter dormancy and delay its regrowth the following spring. No spraying should be done in winter while the grass is dormant.

Treated grass does continue to grow, but the rate of growth is very slow. For the sake of neatness, however, it is advisable to give one mowing about two weeks after spraying. This should leave the grass about two inches high. If treated grass is mown frequently, the combined effects will result in damage to the grass and in unsightliness. The most apparent dissimilarity between treated and untreated grass is the absence of flowering stalks in the former, as this alone can give a difference in height of from 12 to 24 inches.

Once the spray has been absorbed by the plants, no amount of rain will remove it. Complete absorption takes some 30 hours, so that any rain falling within that period will affect results somewhat, but in practice it is found that only if heavy rain falls within 12 hours is there any appreciable effect.

In the United Kingdom the use of MH is temporarily restricted to responsible users such as local authorities. In its present stage the manufacturers do not think that it is of much use to the amateur gardener, nor in their view need the manufacturers of lawn-mowers feel unduly apprehensive.

WE now turn from the one recommended use of MH to the many suggested uses and to the tests and trials that are being carried out in all parts of the world.

The clipping of hedges is a bugbear of many a gardener, and it may be that MH can help him in his trouble. Experiments at the University of California showed that a pyracantha hedge sprayed with MH had its growth checked for at least a month and retarded for several months after that. No damage was done to the hedge. Experiments at the New York Botanical Garden and elsewhere showed that hedges of privet, for example, needed only one clipping during the season instead of the usual three. In England privet and thorn have been treated quite successfully, but elder was easily damaged by the spray.

GROWTH INHIBITION FOR THE GARDENER

If potato plants are sprayed with MH while the foliage is still green or before it has died down appreciably, the resultant tubers can be kept in storage for up to 12 months without any signs of sprouting. This is important to the grower or merchant of ware potatoes, although, of course, it cannot be used for tubers intended as seed. The tubers from these sprayed plants do contain a slight residue of the chemical, but these tubers have been widely tested on animals and no harmful effects have been shown. They are also sold for public consumption in the United States and no ill effects of any kind have been reported.

Onions, carrots, parsnips, and turnips have all been treated successfully in the same way, though with a slightly lower dilution of the chemical. On sugar-beet, MH has helped to prevent the breakdown of sugar in the beet during storage and has also hindered sprouting.

It is being tested on soft fruits with a view to delaying the blossoming in order to avoid spring frosts. Work in this country has shown that, although the delay to blossoming could be achieved, the reduction in the total crop of fruit was too much to recommend the use of MH in this way at present. The chemical has also been sprayed on to or injected into trees for the same purpose, and it has been suggested that dwarf trees might be produced in this manner.

When vegetables such as lettuce and spinach are sprayed, they do not bolt so quickly as those unsprayed. Rosebuds dipped in MH had the opening of the buds delayed to such an extent that the flowers could be kept in

normal cold-storage for from 2 to 4 weeks and when removed kept longer in the home than untreated roses. Chrysanthemum plants can be sprayed to check growth at the tips and promote side growth, thus giving the same results as the normal pinching-out of the terminal buds by hand. This may prove useful to the commercial grower. In this connection it is reported that a research worker accidentally sprayed several plants of dianthus in the autumn. In the following spring these plants were a little slower coming into flower than the normal ones, but when they did bloom they had twice as many flowers as the others.

The wild oat is a serious weed in many cereal crops, and MH is being tested in Canada as a means of controlling it. This control is made possible by the fact that some cereal crops reach the heading stage of growth at a different time from that of the wild oat. Barley, for example, can be sprayed when it has been in head for about 6 days but while the wild oat is still in its shot blade stage. The spraying causes almost complete sterility of the wild oat but does not materially affect the yield of the barley.

On tobacco plants, MH stops the growth of the suckers while allowing existing leaves to increase in size.

Thus it would seem that this maleic hydrazide has many interesting applications in the horticultural world, and while its use as a growth retarder on coarse grass can be said to have more or less established itself, the future may prove it to be just as valuable in many other ways.

Youth

*Aged, wise, and white of hair,
Sleeping, weary, in your chair.
I would sooner waking be,
No use wisdom is to me!
You can all your knowledge keep
When it weights your eyes with sleep.
I will have my youth, and hold
Learning foolish, logic cold.
Banish scholar's thoughtful looks,
Play and pleasure are my books.
If Spring is brief, why needs remember
The sure advance of bleak December?*

VIVIAN HENDERSON.

The Amish

ORMA DALE

'YOU know, it's like being in a foreign land down there,' a New Jersey friend of mine said when I was leaving to visit some relations in Lancaster, Pennsylvania. 'Those Amish sure are a queer people.'

'Amish?' I repeated in a puzzled tone.

'No, I don't suppose you've ever heard of them,' he said. 'Publicity isn't much in their line. They're a religious Mennonite sect that came over from the Rhine Valley about two hundred years ago. Like a lot of other people in those days, they wanted freedom to live their own lives in their own way, and at the invitation of William Penn they settled down in Pennsylvania. During the years a few of them have wandered south and west, but the majority of them are still to be found in Pennsylvania, around the historic old town of Lancaster, living almost exactly the same kind of lives as their forefathers. Progress, believe it or not, is something they don't approve of.'

Personally I found it quite inconceivable that in this fast-moving country a generation could continue in the identical steps even of their parents, let alone their great-great-grandparents. And Lancaster, after all, was not in the backwoods; it was only a hundred and fifty miles from super-streamlined New York. But my friend was right. In the gentle peaceful countryside of Pennsylvania I did indeed find a colony of people who might have stepped straight from the pages of a history-book.

I SAW the Amish first in one of the large chain-stores in Lancaster—tall, dark, austere figures that looked completely out of place among the gay dresses and accessories that they would never think of buying, far less dare to wear. Their own clothes were simple and sombre. Black was the predominant colour, but here and there, especially

among the children, it was relieved by splashes of blue and green. The women have long dresses that entirely cover their black woollen stockings and high button-boots, and when they go out they put on a shawl or a long cape if the weather is cold, and cover their heads with enormous black bonnets, made after the pattern of the old sun-bonnet, with broad ribbons that tie in a large bow under their chin. No jewellery is put on, and even such useful trimmings as buttons are held to be frivolous ornamentation. The men wear home-made suits of black serge and flat shovel hats like those favoured by the clergy of the Church of England. The children, even the youngest toddlers, are dressed in exact miniature copies of their parents' apparel, which gives them perhaps a rather deceiving air of pathetic solemnity.

The Amish are first and foremost farmers. In the green fertile country round Lancaster and the neighbouring smaller townships of Blue Ball, Bird in Hand, and Intercourse they grow many acres of tobacco, not the fine Virginian variety, but a coarser type that is chiefly used for the outer wrappers in the manufacture of cigars. Their farms are undoubtedly among the most prosperous and well-kept in all America, in spite of the fact that they are barred by their beliefs from employing any modern implements or machinery. This apparently paradoxical state of affairs is due entirely to the unsurpassed quality of Amish husbandry and to their enormous capacity for hard work. To the Amish, work and life are almost synonymous from their earliest years. I can recall vividly the picture of a very young boy working barefoot among the tall stalks and large green leaves of the tobacco-plants. It was barely six in the morning when we saw him, but doubtless when six o'clock came round that evening he would still be working away.

THE AMISH

The Amish also believe strongly in the value of communal effort. When, for instance, a farmer wishes to build a new barn, he has only to summon his neighbours and without further inducement they will leave their own fields and come to his aid, sure in the knowledge that he will do the same for them one day. Thus the Amish farmer has no labour worries or wage disputes to disturb his peace of mind or, more important, his work.

AS in most peasant communities, father is all. He rules the family with a rod of iron, and his word is the law against which there is no appeal. Mind you, this is not necessarily so tyrannical and oppressive as it sounds. I saw many families of happy laughing children who were most obviously the apples of father's eye; but paternal rule is an essential practice in the preservation of the Amish as a unique and distinct community. Without it the outside world would long ago have swallowed them up, no matter how fanatical their forefathers had been.

The woman's place in this patriarchal system is naturally and very definitely in the home. And what large bleak homes they are, with their grey-painted walls and almost permanently drawn blinds. Inside, the women work in conditions that the ghosts of our great-grandmothers would probably recognise. No electricity, central-heating, or even plumbing is allowed, and the housewife must pump her water from the well, trim and clean her lamps, and chop wood for the stove, just as the settlers did in the old pioneering days. Like her husband, she toils from dawn till sunset, and her clean, cheery kitchen is a constant hub of activity. As well as cooking and baking for her household, she sews and mends all the family's clothes, including her menfolk's suits and her own sun-bonnets. She also controls the dairy and poultry-yard and cares for the fruit-trees in the orchards.

On market days the Amish woman is especially busy. Long before dawn she and any of her daughters who may be old enough are up and bustling about their preparations, for there is much to be done. The tender succulent chickens have to be plucked and cleaned, the downy angel-food cakes are to be baked, the butter, cheeses, and eggs collected, and, varying with the season, the rosy apples or velvety peaches to be piled high in the

bushel baskets. Once in the large whitewashed Lancaster Market, she sets out her goods in the most appetising manner, and a fine job she makes of it. You have only to glance at the laden stalls and sniff the sharp yet satisfying aroma compounded of fresh bakery, poultry, fruits, and sweetmeats for your mouth to water and your purse-strings to loosen. There is no need for sales tricks, for the Amish woman knows full well that the produce of Amish kitchens has earned for itself through the years a very high reputation among the discerning Pennsylvanian Dutch housewives. While the purchasers prod the white smooth breast of the chickens and test the firmness of the fruit, the stall-holders exchange recipes and choice bits of gossip with the relish of women all over the world.

SUNDAY is the social day of the week. Religious services are held in the morning and evening, either in a meeting-hall or in the parlour of a farmhouse, depending on whether the worshippers are Church or House Amish. The latter is the older, stricter sect, but it still has a large proportion of adherents. The house services are one of the few occasions that merit the use of the parlour. For the most part it is a cold, formal, unfrequented room.

In the afternoon the whole family may clamber into a small covered-wagon and drive over to visit their neighbours, who on account of the very strong custom of intermarriage are probably relations as well. If you should happen to drive past their homes on a warm Sunday in summer, you would see large gatherings of them, from long-bearded old men right down to the youngest great-grandchild, sitting out on the porch, chattering away in a Dutch-corrupted form of Low German, which is the language they use among themselves. And if you were to slow down your car to have a better look, as I must admit my friends and I did, they would probably smile and might even wave over to you, for they have grown used to the stares of the outsider and accept them good-naturedly. Among their immediate modern neighbours they are respected as trustworthy, hard-working fellow-citizens, but to the visitor from other states, and even more, of course, to those from other countries, their curio value is their greatest draw.

Sunday is also courting day, when the quiet

CHAMBERS'S JOURNAL

roads ring with the prim but happy laughter of the young people as they drive in the freshly washed and polished buggies, which always have their roofs folded right back on such occasions. It is only after marriage that the couple are permitted the intimacy of a closed wagon. After marriage, too, the man gives up shaving, and newly-weds are easily recognised by the thin wispiness of the husband's beard. There is a rather charming belief that when an Amish girl reaches marriageable age her father paints their front-gate blue, so announcing to any young man that there is an eligible daughter in the house. The Amish themselves vigorously deny this practice, but the fact remains that there are a great number of blue gates in the district, though probably they have their origin in nothing more subtle than the general love of blue as a colour.

The courting couples of the spring are usually married off in batches in the autumn, after the harvest has been gathered in, when it is not at all out of the way to see twenty or even thirty couples turning up in one day at the county offices to apply for marriage licences. Thanksgiving Day is very popular for weddings, and all day and far into the night there is great feasting and merrymaking, culminating in the bridegroom being tossed over a near-by fence by his companions, after which he is declared to be truly married. But next day he will be out working in the fields, while his bride busies herself about her new home; honeymoons are never indulged in. The chief wedding-present is invariably a farm. Every Amish farmer endeavours to provide a farm for each or as many as possible of his sons. To this end he conserves much of the wealth that his lucrative tobacco crop brings to him each year.

SO the pattern of life continues, generation after generation. Very slowly modern

notions, such as higher education and up-to-date sanitation, will infiltrate into their lives, but in a quite remarkable way these people have succeeded in erecting a stout and so far highly effective barrier against outside influences.

Do the Amish ever cast wistful glances in the direction of their neighbours, I wonder? Does the Amish housewife sometimes long to bundle her laundry into one of the shining porcelain washing-machines she sees in the shops of Lancaster? Do the teen-age boys and girls ever have the urge to slip into the pictures and hold hands together in the back row, and does father never feel tempted to lay aside his horse and buggy and sit behind the wheel of a powerful streamlined automobile? Probably not. They certainly seem contented enough with their austere mode of life. At any rate, they would never express such 'doubtful' longings, for, if they did, they would no longer be Amish. When during the last war a few adventurous young men ran away to join the army they were immediately regarded as dead by the rest of their family and friends. Even their names were not spoken again, thus making their banishment the more complete.

Yes, they are a queer people, the Amish, especially when you compare them with their not-so-distant neighbours in New York, who are swished in subways or fast cars to their work in gigantic department stores and skyscraper offices, and who pass their evenings in the cinemas of 48th Street and the theatres of Broadway.

Of course, there may be people who would prefer to apply the adjective queer the other way round. You can choose for yourself. But there is one thing common to both communities—they are all Americans. Each is a part of the multicoloured patchwork quilt that is America, and that is at one and the same time her greatest peculiarity and her greatest strength.

The Tide of Spring

*A gusty breeze flings silver rain,
Grey skies are streaked with primrose light,
The roadside pools wink dazzling bright—
Unseen, the year's tide turns again.*

*Too sweet, too clear, the small birds sing
From high in yet unbudding trees;
The air is full of faint unease—
How swift flows in the tide of spring.*

M. G. HULL.



Crocodile Bait

IVAN CAMERON

I WAS one of the very few who liked young Jim Randall from the day he came to the lumber-mill town of Cadiz in the southern Philippines. At the time, Cadiz seemed no place for this shy and gentle man. Built on a narrow strip of sand and mud between the sea and a river, with vast mangrove swamps and jungles beyond, this was a remote, whiteman's hell—a land of strong men only, of primitive passions and corroding heat.

The tide was low that afternoon, and the lumber schooner hove to a mile off shore, unable to navigate the channel at the river's mouth. The whitemen at the mill saw a chance for some fun. They sent a water-buffalo out for the stranger—their favourite initiation for a new arrival.

It was a good show, but I felt sorry for anyone forced to ride bareback on a Philippine carabao. The buff plunged through the surf with the newcomer holding grimly to its horns, a brief-case tucked under one arm. Standing on the buff's rump like a circus rider, a grinning Filipino boy guided the beast ashore by means of a rope through a ring in its nose.

Once on the beach, the buffalo kicked up its heels and tossed Randall over its head. Randall got up slowly, retrieved his helmet,

and began to wipe the spray from his glasses. He was a small, fair man under that wobbly, over-sized helmet, and his wet clothes flapped against his lean shanks. His injured dignity, his bewilderment, seemed ludicrous at the time.

The mill employees crowded around laughing. It was a jolly good reception, from their point of view, but Randall was quiet, reserved, and didn't think it funny.

When he stuck out his soft, white scholar's hand, I took it heartily. I liked him at once, but I knew it would be tough sledding for him in the smug, arrogant little colony of whitemen. I wasn't one of them myself. I was a visitor, having come down from Manila to hunt wild jungle-boar and crocodiles.

In the past week I'd bagged six of the huge reptiles. The crocs on this island of Occidental Negros were big sea-going brutes that travelled between the river deltas and lurked in the brackish tidal waters of the mangrove swamps. They often attain a length of 30 feet, and a big one can easily handle a 1000-pound ox. But I couldn't stomach the native hunting methods. They fasten a long pole out from their canoes, with a terrified dog tied by his hindlegs at the end, his head suspended about a foot above the water. The

CHAMBERS'S JOURNAL

pitiful howling of the living bait brings the crocs slithering from their dens. After the first such experience, I did my shooting from a motor-launch, trusting to luck.

The resident manager at Cadiz was famous Colonel Samuel I. Johnson, Provost Marshal for the Allied Expeditionary Forces at Vladivostok during World War I. He'd heard that young Randall, a bookkeeper, was stranded in the islands, and had brought him in to aid with the annual operations report. I suspect the Colonel footed the extra expense out of his own pocket, but it was worth it to relieve pressure from the Manila office, and maybe Randall could be worked into a permanent job. He'd have shipped him out damn quick had he known the dreadful adventure that loomed for him.

THAT evening at dinner in the Colonel's big house beside the river Randall got the works. Plainly, our white colony felt let down, especially the bored wives, who'd looked upon the arrival of a new man with fluttery expectation. He was meek and abashed. When the string orchestra started up, they found he couldn't dance, and when they tried him at bridge he made the usual unforgivable errors. They froze up. He excused himself early and went to bed.

In the next few days Randall was even more of a social bust. He didn't drink, hated cock-fights, and was a dub at tennis. As a last resort, the men decided to initiate him into their unique and dangerous Crocodile Swimming Club. It was a game invented by men rotting away with boredom, but they only played it when the Colonel was in Bacolod on business.

The river below the manager's house was fifty yards wide, and it was filled with crocs—not big crocs, you understand, just little, gentle crocs of 10 to 20 feet in length. Playful fellows—if they weren't hungry! The idea was to swim across the river to the mangrove swamps and back—for a sizeable wager, of course! The game had its thrills, all right, but personally I'd just as soon play Russian roulette.

After the mill shut down for the day a group of the men came over from Cottage Row, where they lived with their homesick wives or native wenches. I don't remember all their names, but Big Alex, a husky band-saw operator, was their leader, and he'd been

drinking tuba—a hellish coconut brandy. He bet a hundred pesos Randall couldn't swim the river.

For a moment Randall stood there on the veranda and stared up at the towering hulk incredulously. 'Are you crazy?' he finally quavered.

Big Alex scowled and clenched his fists. 'Why, there's nothing to it, little man. You just swim the river, collect your money, and you're a member of our club. The worst is the return trip. Then you get the cold shivers and your guts tighten up. But the crocs won't bite you in deep water. They got to have leverage for their feet and tails.' He turned and winked at the others.

'I think it's damn foolishness,' said Randall, sweating. 'I'll bet you two hundred pesos you can't do it.'

'Taken!' roared Big Alex. 'You got the money?'

Randall hesitated, his lips pale.

'I'll put up the wager,' I said.

WE watched from the high veranda railing while Alex went down to the wharf and stripped. I'd seen the swim made before, and nothing had happened. Just the same, I went quietly to my room and got my scope-mounted rifle.

The river was at flood-tide, with no current to buck, as Alex plunged in and started across. He cut through the water, belly flat on the surface, arms reaching out in a beautiful crawl, legs churning. He reached the other side, turned, waved to us, and began the return dash.

It was then that we saw the crocodile ease out of the mangroves and slide swiftly after Alex, gaining with every flip of his powerful tail. The men beside me were shouting and waving. I saw the croc's jaws open. I put the first bullet right between his eyes. I gave him three more, firing over Alex's bobbing head. It was very close.

With the sound of the shot, Alex really clawed water. I hoped his guts were cold and tight. He scrambled up on the wharf like the devil was on his behind. Then he looked back and cursed. The croc was sinking from view in a bloody froth.

Big Alex offered me his hand—a little begrudgingly, I thought—and mumbled his thanks. The incident had shaken the other members of the Crocodile Swimming Club

CROCODILE BAIT

badly and was sure to spoil their future fun. They'd have to invent another idiotic distraction.

"I'm sorry, Randall," said Big Alex as he turned away with the others. "You might have been killed." But I knew they'd brand Randall for a coward to cover their own chagrin.

I SOON learned what Randall liked to do most—sketch! He had his precious sketches in that brief-case. He showed me the collection, rather shyly, you know. He had a rare talent for etchings in coloured ink. He liked to take off alone in a pirogue to study the fantastic swamp-life. The Colonel gave him a Remington automatic, taught him how to load and aim. He couldn't hit anything, and he was afraid of the recoil and noise, but he always took the rifle dutifully along.

Late one afternoon found Randall paddling up the majestic river where dense jungles of mangrove trees stood on their buttressed roots like many-legged monsters. The wan light hung like a luminous veil over the pristine tranquillity of the wilderness. He'd gone further than his wont, and was about to turn back, when he heard the mournful cries. They seemed to be coming from round the bend and they made shivers run down his spine.

At first he couldn't identify the sounds. Then, as he swept around the bend, he saw a dog tied to a stake in a clearing. Randall realised at once that the dog had been put out for crocodile bait and was wailing in mortal terror. There was no human being in sight. "It was a poor, mangy little bush-dog," Randall told me later, "but my heart went out to it."

He'd been warned about crocodiles, pythons, and quick-mud, if he went ashore. But he was unmindful of danger. He tied his craft to a mangrove and carelessly left the rifle propped in the bow. The dog ceased howling, and bared his fangs. Randall circled at a safe distance, talking to the animal gently. The dog answered with a snarl.

As Randall walked by a vine-draped tree, the ground hissed underfoot. It seemed to heave and sigh. In instinctive alarm, he took another step—and sank to his ankles in the foul, bluish-green mud. Then, suddenly, he

was up to his knees. He tried to lift his feet, but the stuff was like hot glue, bubbling and seething. He threw his hands up and grabbed at the overhanging liana. The ropelike vines tore loose, and long, twisting strands came down around his shoulders. He began to struggle, only to sink deeper into that lethal embrace. The mud was soft as velvet, yet it had the crushing power of a vice. His ribs felt as though they were caving in, and he was panting now in short gasps. Swiftly, inexorably, he was being swallowed alive, and there was nothing he could grasp. In another moment or two that miasmic pool of mud would close over his head. Death was near, and he whimpered in terror.

Finally, when he was up to his armpits, he felt something firm underfoot. The pit had stopped swallowing. His senses cleared. He knew he was standing on roots from the near-by tree. Miraculously, he was safe for the moment. The pressure eased somewhat and he tried calling for help. He gave that up when it provoked the dog into another long howling fit. Predatory creatures in the swamp were listening.

Randall thought the man who'd staked the dog would presently return. He learned afterwards that the native had abandoned his vigil to join a funeral party in the nearest barrio. The Visayans celebrate a death in the manner of a fine old wake, everyone dancing, singing, and getting plastered with tuba.

THE Cadiz delta is an eerie, sinister place at night. Soon a huge lemon-coloured moon came rolling down from the purple Negros mountains, sending long shafts of dazzling light along the waterways between the moss-festooned mangroves.

To Randall's tortured ears there were mysterious sounds and movement in the shadows. Huge Philippine bats circled between the treetops and the moon, while the nocturnal clock-birds called the deadly passing hours. A smell of death and decay permeated the sultry atmosphere. Just after dark the mosquitoes settled over him like a black shroud. They stung his face with thousands of tiny needles and sucked his blood until his eyes were almost swollen shut.

But Randall had not been idle. He had braided a lariat of liana and he was trying to lasso the rifle-barrel. He had an ingenious

CHAMBERS'S JOURNAL

idea, but he was no cowboy. The pirogue swung at the edge of the big clearing, twenty feet away. Its bow just touched the bank. The barrel protruded a foot over the bow. A few times the noose fell over the mark, only to slide off. He kept trying with grim determination, and meanwhile the dog moaned and whined.

Suddenly, the dog's tone rose to a high-pitched frenzy and he strained wildly at the leash. The croc had come!

He was a 30-footer, and Randall thought the awful length of him would never cease gliding out of the river. He came at a slow, lumbering crawl, turning his hideous snout suspiciously from side to side. He paused, raised himself on his short, gnarled forelegs and looked steadily at Randall. The moments ticked by and Randall didn't move a muscle. But he hadn't fooled the croc.

Lowering his head at last, the croc continued his advance on the dog. Then the ground churned under him as he lunged. His great jaws snapped and the dog was crushed and gulped down in an instant. Appetite whetted, the croc swung ponderously toward Randall. The brute's light underbody gleamed like white armour and his serrated tail twitched expectantly. He was now so close Randall could smell the fetid breath, could hear the rumbling of his belly, and see his dragonlike nostrils open and close. As a last slim chance, Randall raised his voice in a long, piercing wail—and kept on until he thought hysteria would rob him of all reason.

The croc halted in surprise. Moonlight caught in the reptile's eyes and they glowed for a second with a baleful red fire. But he knew the man was helpless and he wouldn't hold off for long. He started to move forward again, then paused and jerked his head quickly toward the river. Another saurian shape had emerged from the water and was creeping up the bank.

RANDALL stopped yelling and watched in numbed fascination as the two scaled reptiles clashed. They met with thunderous bellows, arching themselves in the air, sharp-pointed teeth ripping and tearing. Falling back to the ground, they manoeuvred warily for a mortal hold. It was a battle of monsters primeval. Few men have witnessed a battle to the death between bull crocodiles. Randall, despite his fears, knew he was part of a scene

from a primordial, lost world. The very earth trembled as the two enraged brutes slashed and tugged. Randall's croc—he knew him now—tried for a throat-hold. The other side-stepped and rolled. He crouched as Randall's croc followed up, then turned his adversary over with a quick flip of his snout, and snapped viciously at the unprotected underbelly. He drew blood, but couldn't retain his hold. At times the reptiles stood almost upon their tails.

Randall suddenly realised that precious moments were fleeting by and that he must concentrate on lassoing that gun. He kept one eye on the titanic struggle while he threw the lariat. The battling reptiles thrashed on the far side of the clearing and the swampland rang with their savage roars. They had plenty of room for combat, but Randall feared they might work round toward the pirogue.

By now, however, he had mastered the lariat, and at last succeeded in setting the noose on the barrel. It snagged on the front sight. He pulled prayerfully, slowly drew the gun on to the bank and eased it through the mud. He seized the precious weapon with a cry of triumph, and a gush of confidence welled up in him. But his elation was short-lived. He looked at the gun, and his heart sank. It was clogged with mud. He cleaned out the muzzle with a liana stem and wiped off the sights. He was still not sure if it would fire. And how many bullets did it hold? Four? Five? He couldn't remember. He'd wait until the fight between the crocs was over. Then he might have only one to shoot.

The end came suddenly. Randall's croc saw an opening, roared in and clamped his jaws on the other's throat. It was a powerful bulldog hold. A stream of dark blood gushed into the air, and the stricken croc thrashed in agony. All his contortions could not break that fatal grip, and he gradually weakened. In ten minutes he was dead.

The victor released his jaws and backed away. He made no attempt to eat his dead foe. Instead, he wheeled as though there had never been an interruption, and made for Randall again. Randall had heard of crocodiles with a taste for human flesh, and it seemed certain his was a man-eater. He felt that if he came out of this alive, he'd never fear anything again—nothing on earth or in hell!

HEALING WINGS

Randall could have started shooting when the croc was many yards away. Not sure of his gun or his aim, he waited. It takes real guts to watch death creeping up on you. He might have lost his nerve and fired in blind desperation. But he held his fire until the croc almost reached the rim of the quick-mud pit, then as the cruel upper-jaw lifted and revealed the cavernous maw, he fired point-blank. Five heavy bullets smashed down the croc's throat, blasting his insides apart.

You can't blame Jim Randall for blacking out after that.

WE were purring up-river in a motor-launch, probing the grotesque shoreline with a searchlight, when we heard the shots. Far off, muffled. But they led us to Randall. We hauled him from that hungry pit of quick-mud, limp and half-conscious. We soon had him safely aboard and snapped him out of it.

Big Alex handed him a whisky-bottle, and Randall took a slug that would have choked a giraffe.

'That was smart work, your lassoing the gun in time,' said Alex, respect and awe in his voice.

'I sure needed time!' said Randall hoarsely. 'I figured if I could scare up another croc, they'd fight over me. I was bait, you see, so I yelped like a dog. Brother, was it mournful. In came the other croc, all right.'

Jim Randall was accepted at last, and something of a hero besides, but that isn't all to the story.

I went into the interior the next day after wild boar and was gone for a week. On my return, I found Randall in his bungalow, packing. I was struck by the change in him, the air of self-assurance and manhood. There was something about this man that told you he could be mighty dangerous if unfairly pressed, a staunch and fearless comrade otherwise. Had I witnessed that magnificent event—the birth of a true adventurer?

'I could never be happy here,' Randall volunteered. 'There isn't enough excitement now. I've got to go on for ever chasing after danger.'

And I knew he would!

Healing Wings *Australia's Flying Doctor Service*

E. M. ARTETA

THE buggy crawled with deliberate purpose over the face of Australia's vast and lonely Inland, a dusty ship on a desperate voyage, wallowing in a sea of sand. There was neither the sign of another's coming nor the track of one having passed before. You could travel a thousand miles to the west before you saw the work of man. It was still a journey of many days to the south before there could be any hope of help. In the back of the buggy, protected by a canvas sheet

from the cruel rays of a bronze ball of fire, lay a woman, little more than a girl, on a bed of spinifex grass, a woman who was soon to become a mother.

The man rode alongside the buggy with the easy grace of one born to the saddle, gently urging the tired horses over the uneven, sandy, stone-strewn ground. Often he would stop to wipe the girl's brow with a rag moistened with a little of their precious water, looking down at her with adoring eyes, trying to mask the

CHAMBERS'S JOURNAL

fear he felt. Later, she would look up at him with a strangely reassuring smile to give him strength and confidence.

On the fifth day, the outfit headed back in its tracks, taking with it a heart in anguish, and leaving behind two crudely-carved wooden crosses, one of them very small, under the shade of a cypress pine.

These crosses, and many hundreds of others in the Inland, were a mute but eloquent appeal to the nation by two hundred thousand settlers scattered over a sun-parched land of two million square miles, an area greater than Western Europe and the British Isles together, an area containing no less than two-thirds of the Australian continent.

The appeal did not go unheard. To-day, thanks to the vision of the Rev. John Flynn, there are very few of the little newly-carved wooden crosses to be found in the Inland. The task that Flynn took upon himself, looking after the forgotten two hundred thousand, was to produce an organisation which is unique in the history of social welfare.

FROM the beginning, Flynn realised that only by conquering miles with units of time could loneliness, twin foe with fear, be lifted out of the lives of the Inland settlers. But how, in 1911, was this to be brought about? How could the deaf Inland be made to hear, the dumb silences to speak! How could help arrive in time to save the desperately injured? How could the lonely ordeal of childbirth be made easier and safer? How could the social welfare of those whose nearest neighbours were fifty, a hundred miles away be assured? John Flynn was to find the answer years ahead in a covenant uniting medical science, radio, and aviation.

In the meantime, if this was to be a dream, a splendid vision of the future, there was still the urgent need of the present. Where railways probed their cautious tentacles into Australia's forgotten land and paused in fear, where roads wandered into the desert and then gave up, there had to be hospitals staffed by nurses who would go into the Inland to nurse the sick, make easier the way of those who were going where a horse could no longer carry them, and usher new life into that strange, hard world of the Outback.

But merely to build hospitals would not be enough. The prejudices of a freedom-loving people who had been isolated from the main

stream of Australian life for more than half-a-century had to be overcome. Flynn knew that stockmen, drovers, prospectors, miners, and bagmen used to spending their life under the sun and stars would sit in the shade of a eucalyptus tree when they were ill, with a billy-can of tea and a pile of dampers by their side, and wait to get better or die. Their fear of the antiseptic orderliness of a hospital ward had to be overcome. They had to be persuaded to get better with their boots off, rather than die with them on.

On the strength of John Flynn's report made during 1911 on social conditions in the Outback, the Church of Australia adopted two-thirds of the continent as a special medical mission. The hospitals were built, and the nurses, a special breed—but then, perhaps all nurses are a special breed—were found to run them. They were, strangely enough, mostly city girls. To ride fifty, eighty miles over waterless, burning plain, to swim horse over swollen rivers, to make a ward out of the wilderness, a steriliser out of a petrol-can over a camp-fire—these things, and a thousand others, were just part of the job. No wonder that the nurses of the Inland Mission are adored by all whom they serve.

MANY, having accomplished so much, would have been content. But not Flynn of the Inland, as he was now called. As he travelled about the continent, superintending the building of his hospitals, he dreamed his dreams, and his heart was not at rest. Too many people were dying grim and lonely deaths. Men were still disappearing in the silent wastes, wandering off into eternity. Children were growing up as shy as wild animals. The long journeys were time-consuming. Distance was the enemy. Too often mothers-to-be were buried by the wayside. Nurses were travelling to the already dead.

The knowledge that the miles could only be conquered by enlisting the aid of the radio and the aeroplane had been evident to Flynn since their invention. It was 1920. The experts scoffed when he approached them with his problems. Every homestead would have to be a transmitting-station needing skilled supervision and equipment costing thousands of pounds. There was no aeroplane that could be certain of landing and taking off again in the diversified types of country to be found in the Inland.

HEALING WINGS

Flynn worked with probing patience, leaving no possibility unchecked. It was the dawn of the radio amateur, experimenting with a new and fascinating medium during the still night hours in a little hut in the back-garden. Perhaps the answer lay here? Perhaps these were the people to help him conquer the cruel, silent miles?

He was looking for a receiving-set and a transmitter so simple that a stock-farm hand could operate it, light enough to be easily transportable, and cheap enough to be within the reach of even the poorest Inland settler. He was looking for a miracle—and he found it.

He ended a seven-year search in the house of George Towns, a young Sydney disabled ex-soldier. Towns was enthusiastic when he knew what was required of him, and he gave of his best. It was not long before Flynn and he were trying out a variety of home-made radio-equipment. But it was a period of hope, disappointment, and renewed hope. The obstacle lay in finding an efficient power-source. Heavy, cumbersome batteries needing constant recharging had to be avoided.

It was not until Alfred Traeger came on the scene with a 600-volt pedal-driven generator that the construction of a transmitter suitable for use in Outback homesteads became a possibility. Transmission was to be in Morse, and the silent Inland would have to learn to talk in dots and dashes.

After seven years of impatient striving—impatient, because death will not wait—the Inland became articulate. 12th July 1929 is a date indelibly recorded in the history of Australia. On that day the first radio-message from a stock-farm was received at the new Cloncurry radio-base. Soon homestead after homestead came on the air. The Flying Doctor Service of Australia had arrived.

The degree of need for this service can be estimated from the fact that during the first experimental year, by buying flying-hours from Quanta, a commercial airline, Dr St Vincent Welch, the first of the Flying Doctors, covered twenty thousand miles in fifty flights that took him to two hundred and fifty patients.

THIS, all too briefly, traces the coming and the cause for the coming of the Flying Doctor Service. It makes no acknowledgment of the unstinting help given to John Flynn in his life's work by all people, important and

unimportant, who believed wholeheartedly in what he was trying to bring about. It but scratches the surface of a story that is a saga of man's fight against the wilderness, against ignorance and apathy.

To-day there are seven Flying Doctor bases serving two-thirds of the continent. At no time is the Flying Doctor's plane more than five flying-hours from his base. It is quite possible that a sick or injured person fifty miles from the nearest human being can be rushed to a modern well-equipped hospital in little more than an hour.

The radio network is made up of the radio-stations at the seven bases and hundreds of transceivers throughout the country. The transceiver is a combined receiver and transmitter, crystal-controlled, powered by a pedal-driven generator, working on a medium waveband, and having a range of two hundred miles or more. Four hundred transceivers are permanently situated in Outback homesteads. In addition to these, a large number of transceivers are used by the itinerant population of the Inland—cattle-drovers, miners, prospectors, salesmen, civil engineers, and Inland Mission workers. The service deals with a hundred thousand telegrams a year, and in the same period advice to settlers is given on more than five thousand occasions.

All communication is by telephony now, and, although loneliness is still present, it is considerably alleviated by the fact that people two hundred miles apart can talk to each other. One can imagine what that means to women who may not see another of their kind for weeks, months, perhaps a year. The Flying Doctor makes a regular bimonthly call at the principal cattle and sheep stations, when he takes with him books and newspapers and the children's correspondence lessons. So the Flying Doctor Service means more than medical aid. It means, in the words of its charter, 'fostering the health, morale, and well-being of the Inland settlers'—the two hundred thousand that Australia had forgotten about for fifty years.

The men who run the service—the doctors, nurses, pilots, radio-operators, and the mechanics—are continually turning down more comfortable and better-paid jobs. They have that rare, rich feeling of being wanted. When a call comes for the Flying Doctor there is no thought of ability to pay: the poor get equal care with the rich, irrespective of creed, class, or colour.

The Cole-Balle Knight

Sir Hugh Plat and his Ingenious Inventions

ELIZABETH WALSH

THERE are some men who cannot keep out of the kitchen. 'Hugh Plat, Gent.' was one of them. Born in 1552, he was the third son of a rich London brewer, and, on coming down from St John's College, Cambridge, in 1572, he became a member of Lincoln's Inn: but he was more interested in literature than law, and published a book of rather poor verses.

At the age of twenty-one he married his first wife, Margaret Younge, and, setting up house in St Martin's Lane, he began to dabble in domestic economy. We do not know how his bride reacted to this invasion of her domain, but life in the Plat household was never dull, for there appears to have been a continuous round of experiments in the kitchen, 'stil-room', and garden, as he tested: 'Sundrie new and artificial waies of keeping fruit and flowers in their fresh hue, after they are gathered from their stalks and branches.'

Plat found out that by the exclusion of air from freshly-picked fruit, the fruit could be kept for a considerable time, so he had made for him 'new forms of lead the bignesse of the Flower, Cherry, or Pear, hanging by the stalk in such manner as it grew.' In these containers he packed the fruit and flowers, fitted them with 'apt covers, and solered (soldered) them very close.' He then buried them in 'a shady place where the sun maie work no penetration,' or hung the leaden boxes in 'some cool and running stream.'

From lead Plat turned to glass, and became the pioneer of fruit-bottling; but the sealing of the bottles was found to be a complicated and dangerous matter. The glass containers with especially long necks and stoppers were placed in a pan of ashes, 'suffering one inch of the neck only to peer above the ashes.' Three inches of charcoal was then heaped

over the bottles and lighted. When the charcoal had burnt down sufficiently for the tops to reappear, Plat sealed the bottles by nipping the necks together 'with a pair of tongs very red-hot.'

In the 16th century 'Orenges and Limons' cost only twelve or sixteen pence a hundred, and everyone was anxious to bottle their juice for 'sauces and jelepps.' Plat's method was most ingenious. He had large glass decanters made with three holes, one at the top and two 'about two inches from the bottom,' these last two being corked when the bottle was empty. The juice was then squeezed through a muslin bag, clarified, and poured into the decanters within an inch of the top, and covered with loose caps until the juice had finished working. When it became 'still and quiet in the pots' the decanters were filled up with 'good sallat oyle,' firmly corked, and placed in a cool closet. To draw the juice, the corks were taken from the side, so that the salad-oil continued to seal it from above, and the sediment sank to the bottom, leaving the clear juice between. In this manner orange and lemon juice could be kept as long as a full year.

Plat's success with fruit encouraged him to learn: 'How to keep and preserve Fowl or other pieces of Flesh sound and sweet . . . notwithstanding an unreasonable summer.' After many failures, and some friction in the kitchen, he discovered that parboiling meat in 'a strong Brime, so as the water be over-quilted with salt,' was the answer.

The preservation of food at sea was the greatest problem of the Elizabethan voyagers, and Sir Francis Drake, who was then fitting out the *Defiance*, rode from London to the Plat's new country house, Bishop's Hall, Bethnal Green, to watch the final tests. He

THE COLE-BALLE KNIGHT

was so impressed with the meat he sampled, which had been kept a month, that he offered to take some of the brine-treated meat when he sailed. He was also extremely interested in Plat's newest method of keeping water fresh by adding 'Brimstone beaten to powder' and frequently pouring the water into fresh hogsheads to prevent it from becoming stagnant.

The tests made by Drake and his crew proved so successful that Plat tells us with pardonable pride that his work benefited 'the whole Navy of England.' In addition to the preservation of food, the Navy also adopted Plat's invention of anti-rust grease, a pot of which Sir Francis had accepted as a parting gift on his last voyage.

HUGH PLAT'S inventions, however, concerned every aspect of daily life, and in his book, *The Jewell House of Art and Nature*, published in 1594, in which he describes them, we find such gems as: 'A Perspective Ring that will give a lively representation to the eye of him that weareth it of all such cards as his companions that are next to him do hold in their hands.' And, although we are assured that this aid to card-sharping was made 'to discourage young novices from card-playing,' we can but wonder if card-parties at Bethnal Green showed some profit for the host!

One of Plat's most useful inventions was a showerproof cloak, made by dipping the material into a mixture of 'Linseed Oyle and Rosin, boiled to a varnish with Verdigrease, Vermillion, or what else you will chose to colour the same.'

It is not known when the first Mrs Plat died, but it seems to have been for the benefit of his second wife, Judith, and their three daughters, that Plat wrote the notes on 'Bewtie,' that in 1602 were published in a pocket manual of household hints, discreetly entitled, *Delights for Ladies, to Adorne their Persons, Tables, Closets, and Distillatories. With Bewties, Bouquets, Perfumes and Waters.*

In the poetical Preface the author tells us:

*To teach and fine each secret I do strive:
Accept the will, and let my wearied Muse
Repose herself in Ladies Laps awhile;
So when she wakes, she happily may record
Her sweetest dreames in some more
pleasant stile.*

Reading the terse directions for removing freckles with an infusion of 'May Dewe' and

elder leaves, to be applied at 'the wane of the Moon,' or for the making of an all-purpose face-cream from 'the jawbones of a Hogge or Sowe, well burnt and beaten,' which was to be 'laid on with oyle of white poppy,' one cannot help pitying the ladies of the Plat family. They must, one feels, have been plain women, for the author gives as his reason for writing his notes an earnest wish 'that Art might helpe where Nature made a Faile!' But it was not only in the Plat family circle that Nature had 'made a faile,' and *Delights for Ladies* became a 17th-century best-seller.

In 1602 baths were seldom taken, and recipes for highly-scented toilet-powder were a necessity to every woman who had to rely on strong scents to freshen the atmosphere in her vicinity! Yet, at least once a year, generally in the spring, Plat tells us that 'Gentlewomen doe delight to sweat to cleanse their skinnes'; and he gives detailed instructions for erecting 'A Delicate Stove to Sweat In.' This consisted of a brass pot of herbs and water, the lid being sealed with flour and white of egg. The pot was placed over a charcoal fire and connected with a leaden pipe to a 'bathing tubbe' with a false bottom bored with holes, through which the warm vapour passed, and the 'Gentlewoman' sat, or stood, in the steam for two hours or more, her head 'helde above the tubbe.'

In the reign of Queen Elizabeth the popular hair-shade was 'Chestnut.' Though the ladies were wont to dye their whole heads, the gentlemen compromised by dyeing only their beards, which led Plat to give advice on 'How to colour the head and beard Chestnut colour in halfe-an-hour,' with a preparation of calcined sulphur and quicklime!

BEAUTY-CULTURE, however, was only a sideline, and Plat gave most of his time to experimental gardening, which included the raising of tobacco, and the growing of grapes, from which he made wine that, he tells us, 'excited the commendation of the French Ambassador.'

In the growing of the vines, the kitchen cooking-pots played an important part. With his usual ingenuity, Plat bored holes in their lids, and, with the aid of leaden pipes, laid on a steam heating-system to his glasshouses. How the lids were removed by the cook for the purposes of stirring and tasting is not revealed.

CHAMBERS'S JOURNAL

When the Plats gave a garden-party, it was their custom to give their friends 'a growing banquet.' To make this possible, Plat dipped cherries and the buds of flowers in 'Allom water made with Rose water' and then dusted them with 'fine searced (seived) powder of double refined sugar.' They were then left for three or four hours for the sun to harden them into crystallised fruits and flowers that the guests might pluck as they wandered in the Bethnal Green garden.

At the end of the 16th century a series of bad harvests brought famine to England, and Hugh Plat began to be recognised as an agricultural expert after the publication in 1596 of his book, *Sundrie New and Artificiall Remedies against Famine*. But weather was not the only reason for the famine, Plat told his readers; the chief cause was the poor fertilisation of arable land. He next went on to give an interesting account of his experiments with artificial manures, all of which he had personally tried out. These included a liquor made of saltpetre, many varieties of seaweed and seawater preparations, a mixture of ferns and 'Sal Amoneake,' and 'shreds of woollen cloth added to the dregs of beer and ale.' He also recommended the burying of dogs and cats at the foot of fruit-trees, and the value of 'composte heapes.'

And, as usual, Plat could not resist experimenting in the kitchen with flour substitutes. He gave recipes for bread made from root vegetables, and, although the one for 'Cheese bread' sounds most appetising, the same cannot be said for 'Sweete and Delicate cakes made without spice or sugar from parsnep rootes,' which, Plat adds, 'I have eaten divers times in mine own house.'

In 1601 Plat published another work, *The New and Admirable Arte of Setting of Corne*, and with its publication his reputation was fully established. Exceptionally cold winters followed the famine, and Plat was again to the fore with a fuel-saving oven, a contraption of iron to be placed over the spits to hasten the cooking of the huge joints, sucking pigs, and fowls.

PLAT'S most important contribution, however, came in 1603 with his '*A New, Cheape, and Delicate Fire of Cole-balles, wherein Seacole is by the mixture of other combustible bodies both sweetened and multiplied.*'

At that time the unfortunate householders were confronted with the twin problems which face us to-day. The coal was very expensive and not always of the best. To combat this last evil, Plat suggested that it 'would be wise, provident and careful not to suffer anie seacoles to be sold or landed . . . unless the same by good experience shall be found to be of the best mines; or at least of such kind and qualitie as will cake and knit together, and so make a hot and durable fire.'

This advice was not followed, but King James I, who had just ascended the English throne, appointed Hugh Plat to keep down 'Fewell' consumption in the Royal Palaces. The reason for the appointment was twofold—a genuine desire to save heavy coal-bills; and a wish to relieve unemployment. Unemployment was particularly rife in London owing to the number of discharged ex-servicemen from the Navy, who, without hope of earning a living, banded together in gangs of rogues and vagabonds, robbing merchants and householders.

Plat's plan was devised to bring these men regular seasonal employment. In the late summer he enrolled volunteers to bring loads of loam to Whitehall, St James's, and other royal residences. Others then mixed this loam in tubs of water until it became of 'the consistancy of pap.' To this was added a small quantity of good 'seacole,' and about three times the amount of poor-quality 'seacole.' The whole was stirred into a malleable lump, from which little 'Fire-balles' were made by hand. These were dried and stored out of the rain until required. Sometimes chips of wood were added, and frequently the whole mass was sprayed with perfume, to make 'seacole-balles fit for Ladies Chambers.'

The inventor claimed that his method did away with the 'hellishe smoke and smoder and smootie substances' of an ordinary fire: and because the 'Cole-balles' were built up in the form of a pyramid, 'the beauty of the fire doeth far surpass all other fires whatsoever.' King James I was so impressed with Plat's successful fuel-saving campaign, and his work among the unemployed, that he knighted him at Greenwich on 22nd May 1605.

Although it was his invention of 'Cole-balles' that brought him honour at Court, his services to agriculture were more generally recognised as his life's work, particularly after his death in 1608, at the early age of fifty-six.



A Housemaster's Case-Book

IX.—*Sidney Mariner*

EVERETT BARNES

*Take but degree away, untune that string,
And, hark, what discord follows!*

SHAKESPEARE.

LONG before the Fleming Report and its recommendation that public-schools should allot a proportion of free places to boys from state elementary schools, Melbury, owing to a private benefaction, had adopted this course. Some of these boys were, in fact, of middle-class parentage, and had been sent to state schools because of poverty or for other special reasons; but most were from genuine working-class homes; and amongst these was my boy Sidney Mariner.

The chief problem attached to the scheme was not any difficulty of assimilating the 'county boys,' who on the whole fitted well into the public-school way of life, with benefit to all concerned, but rather that the Local Education Authority was often hard put to it to fill the free places, because many parents were reluctant to launch their sons into a social sphere different from their own. Sidney Mariner was a boy in whose case this reluctance had been overcome. If his mother had had the final word—as she did in most Mariner decisions—Sidney would never have

come to Melbury; but in this matter his father, who was employed in a gasworks at the other end of the county, stood firm, being determined that his son should have a better education than his own, and that if public-schools were the preserve of 'the governing classes' it was just as well for Sid to get in amongst them. Mrs Mariner had therefore to bide her time and wait hopefully for the scheme to go wrong.

They both came down with the boy on his first appearance, the mother with her youngest in her arms (Sidney was the eldest of a large family). Mr Mariner was a nice man, solid and sensible, with a wink hovering in his eye; Mrs Mariner a florid, well-covered lady without ankles, evidently very class-conscious and a believer in the tactic of aggressive defence. The baby was fretful and provided a chorus to our first conversation, which was rather on these lines:

MR MARINER (polite). I'm sure we're very lucky to have got Sid into a school like Melbury.

MRS MARINER (truculent). H'm. Remains to be seen.

MYSELF (hearty). I'm sure we're all lucky, aren't we, Sidney?

CHAMBERS'S JOURNAL

SIDNEY (depressed). S', yes, sir.

BABY (fed up). Baa—aa.

MR MARINER. He's a good boy, Mr Barnes, and I hope he'll be a credit to you.

MRS MARINER. Always been brought up proper, he has—up to now.

MYSELF. Anyhow, we don't meet trouble till we come to it, do we, Sidney?

SIDNEY. S', no, sir.

BABY. Boo—oo.

One hoped that perhaps Mrs Mariner would be too busy with her family to come much to Melbury.

SIDNEY was short, round-shouldered, and ursine in build, with a somewhat repressed look, as if he shared his mother's certainty that he would not 'fit in'. He spoke in a subdued voice with the Cockney accent which, as education has spread, seems to have usurped the place of country dialects in southern England. A dry humour and a quiet taste in mischief secured his acceptance by the other boys in the House. Public-school boys, in my experience, are not generally class-conscious, at least in their school relationships; they accept other boys on their merits, as they conceive them, and not on their social status or their accents.

Mariner was quite intelligent and showed himself of a practical turn of mind, with a leaning to science. He was a train addict, devoted to machines and electricity, and soon became renowned for his gadgets. For carrying his books about he designed an affair of straps with a quick-release—so quick, in fact, that his books were liable to be scattered on the ground at any moment. The lid of his desk in Day Room was fitted with an alarm which was a positive invitation to amateur burglars; and he had an arrangement by which he could increase or decrease the number of blankets on his bed without putting his hands outside the bedclothes. Other boys laughed at these inventions, but all the same they were impressed.

One particular device may be said to have raised Mariner to the status of an institution. At the earliest possible moment he had joined the Signals Section of the Officers Training Corps (as it was called in those days) because it provided some sort of technical training. Signallers were encouraged to connect their studies with field-telephones, in order to gain experience in handling them. Finding one

of my signallers trying to drill a hole through a window-frame to pass a cable through, I laid it down that if telephones could not be installed without drilling holes in the House, telephones were barred.

Much despondency in the Signals world, till Mariner heard of it and got on the job. He borrowed a cat from somewhere, and acquired a kipper. Then he lifted a floor-board in each of the studies concerned (they were thirty to forty feet apart); into one aperture he inserted the kipper tied to a string, into the other the cat with a thread attached to its tail. He replaced the second floor-board, leaving a chink through which the thread could run. In due course the cat, in its subterranean explorations, made contact with the kipper, which was drawn up through the floor, followed by the cat and the thread. A string was then attached to the other end of the thread, and a telephone-cable to the string—and thus in a matter of minutes was connection triumphantly established.

WHEN the time came for Mariner to have a study, a boy called Travis applied to share it with him. Richard Travis was the son of a landowner in Norfolk. He was a tall, good-looking, easy-going sort of boy, with about as different a social background from Mariner's as could be imagined. Yet they were firm friends—Travis also was in the Signals Section—and had been so from the start. They had a common interest in science, and Travis was a humble admirer of Mariner's technical achievements.

From the moment when this partnership began, it was generally in the news. One bright project after another blossomed in No. 5 study, Travis supplying the money for material and Mariner the inventive brain. Boys were not allowed to connect reading-lamps to the pendant lights in their studies, but it had not occurred to anyone in those days to prohibit other electrical appliances, because no boy had ever attempted to use them. When part of the House had been twice plunged into darkness at inconvenient moments and the school electrician had discovered in No. 5 study two electric foot-warmers and a toaster, all home-made, connected to the centre light by a series of adaptors, a new rule had to be devised.

The firm of Mariner and Travis was then reduced to basing their effects on portable

A HOUSEMASTER'S CASE-BOOK

batteries, with which No. 5 study was liberally furnished. The modern conveniences then introduced included a reading-lamp (not connected to the main light and therefore legal), a door-bell which in some mysterious way sounded when anyone other than the owners entered the study, a machine for polishing Corps buttons, and a device called a 'guest-remover,' which gave shocks to visitors who outstayed their welcome.

The odd-job man, Bates, reported to me one day that the stokehole was flooded. Someone had turned on the tap by which the boiler could be emptied for cleaning. I went to survey the flood and found it three or four inches deep. 'How do you think the tap came to be turned on?' I asked.

'Ah!' said Bates. 'I reckon someone must have turned it on. And what's more, it was done wilful.'

'It seems a pointless thing to do.'

'Pointless if you like, sir, but wilful all the same. You see, the tap weren't running when I found it. Him as turned it on had likewise turned it off.'

A notice demanding to know the perpetrators of this outrage brought Travis and Mariner to my study, 'most deject and wretched.'

'About your notice, sir,' said Travis, 'I'm afraid we turned on the tap in the stokehole.'

'Well, Ah did reelly, sir,' said Mariner.

'What on earth were you trying to do? Seeing if the boiler would burst?'

'Oh, no, sir, the boiler wouldn't get empty. We put a pipe on, but it came off, like.'

'Perhaps you could explain what you were up to.'

Mariner explained. They thought it would be nice to have hot water laid on to No. 5 study, the window of which was only a few yards from the stokehole. They had therefore run a length of rubber pipe from the boiler emptying-cock and connected it to a tap in the wall of the study. For a time the hot-water supply was lovely; then the pressure forced the pipe off the emptying-cock. As the study tap ceased to flow when turned on, they sought the cause of the trouble in the stokehole, and paddled through the flood to turn off the cock. The incriminating hosepipe was also removed.

Punishment of a many-sided kind was meted out to the inventors, which included baling out the stokehole and paying for repairs to the study. It was difficult to add further

prohibitions, because one never knew what that fertile brain would think up next.

A NEW kind of trouble began to loom up in the summer term at Speech Day, which was attended by Mr and Mrs Travis and Mrs Mariner. Mr Travis was a good example of his kind—a J.P. and chairman of his County Council, and in his domestic affairs a devotee of the quiet life. Mrs Travis, on the other hand, was, to put it bluntly, first and last a snob; a good wife, no doubt, a kind mother, and a conscientious president of the local W.I.; but birth and breeding were to her divine gifts of first importance which must not be diminished by unwise contacts with the vulgar.

In the sultry heat of a July afternoon, when the Speeches were over and wise parents, including Mr Travis, were at ease watching the cricket, while the unwise—a much larger throng—were clustering and reclustering at the side of the ground, Mrs Travis told Richard she would like to meet his study companion. Richard, it seems, in his letter had been vague about Mariner, and Mrs Travis wished to see him for herself. Knowing full well what his mother would think about Sidney, Richard might easily have pretended that he could not find him in the crowd, but, to his credit, he decided to stand by his friend and let his mother do her worst.

Mariner, when found, was naturally with his own mother, and Richard had no option but to bring them both into the presence. I should in accuracy have said 'all three,' because Mrs Mariner had again brought her latest-born with her, this time in a folding pram—an act which, however indicative of natural affection, was, I feel sure, without precedent in the records of Melbury Speech Days.

I was talking to some parents close by, and I hope it was not too plain to them that I was less interested in their conversation than in the Travis-Mariner meeting. Mrs Mariner pushed her pram aggressively towards the enemy, with Sidney trailing unhappily behind. Neither woman made any offer to shake hands, and Sidney, to avoid all uncertainty, kept his hands firmly behind his back. The mothers exchanged a few remarks, with Mrs Travis looking down her nose and Mrs Mariner glaring balefully. Then Mrs Travis turned

CHAMBERS'S JOURNAL

and walked away. Richard stayed to say a few words to the Mariners and then followed his mother.

I had already talked to the Travises, so that I could dodge them for the rest of the afternoon with a clear conscience, but I knew that I ought to speak to Mrs Mariner. I was making my way in her direction when, to my confusion, she moved off to a bench at the edge of the ground, more or less out of the general traffic, and began to feed her baby. I decided not to intrude on this function, and hastily changed course.

Later on Mrs Mariner sought me out. She had the sense to send Sidney away and then went straight to business without introductory greetings. 'I wanted to see you, Mr Barnes,' she said. 'You know what I thought about Sidney coming to a school like this? Well, it's going to turn out a lot worse than what I said.'

'I'm sorry you think that, Mrs Mariner,' and I discreetly edged her and the pram a little out of the main stream of parents.

'I do think it, and I shall go on thinking it. What's more, Mr Barnes, I'll have to put my foot down about one thing. Sidney can't go on sharing a study with that Travis. I've got nothing against the boy himself, except that he's not our sort and can't do Sidney any good; but now I've seen his mother—well, that's proper put the tin hat on it as far as I'm concerned.' Then an unconvincing afterthought: 'And that goes for Mr Mariner too.'

'What do you want me to do, Mrs Mariner?'

'Just put them two in different studies next term, if not before.'

'It's not as easy as you make it sound, Mrs Mariner. I always insist that the sharing of studies shall be congenial. I shouldn't be able to place either of the boys so happily as they are now.'

'A lot of boys likes what's not good for them—as you'd know, Mr Barnes, if you'd seen as much of life close to as what I have.'

I decided to turn Mrs Mariner's flank. 'Besides, I must be fair to all. Your Sidney is much the stronger character of the two, and he's doing Travis a lot of good.' I really believed this, in spite of the flooded stoke-hole and everything else.

Mrs Mariner didn't quite know what to make of this, so she wiped the baby's nose and repeated her general theme with less conviction. Then I had to speak to some other

parents, and got away without committing myself to any action.

After most of the guests had gone and I had got back to the House thinking that the social labours of the day were over, the Travis parents turned up again. Mr Travis had obviously been drilled to take the initiative. 'Sorry to disturb you again, Barnes,' he said, 'but my wife and I are not very happy about Richard's study companion. Nice enough boy, no doubt—I've got nothing against him—never laid eyes on him, as a matter of fact—but I understand he's a bit of a rough diamond—though maybe none the worse for that.'

Mrs Travis was obviously wishing that the drill had been better learnt. 'Seriously, Mr Barnes,' she said, 'we are very worried about it. The boy is probably a very worthy boy—I don't doubt it for a moment—but now I've seen his mother . . . My worst enemy wouldn't call me a snob—but *really*, you know! It's the lack of background—of tradition in the home. It's so difficult to put into words, but I'm sure you know what I mean.' The subtle stress on the 'you' I took to signify, 'as one snob to another.'

I was not going to make things easy for her. 'What would you like me to do?'

'Couldn't you arrange for Richard to share a study with—I know the word's out of fashion these days, but there it is—with another gentleman? After all, that is what we're paying for.'

I said almost exactly what I had said to Mrs Mariner, including the bit about Sidney's being the stronger character.

Mrs Travis was genuinely upset. 'Well, *really*! But if that were true, it would make things far, far worse. I couldn't bear to think of Richard actually being influenced by a boy like that!'

I tried to give Mrs Travis a better sense of values, but I fear the effect was slight. Anyhow, I got out of this interview also without committing myself to anything. I had every intention of letting the boys go on sharing a study, because I really believed they were benefiting each other. Mariner was filling a vacuum in Travis which would certainly have been far worse filled without him; and Travis was knocking some of the uncouthness out of Mariner.

FROM this time onwards there was embittered strife between the two mothers; but

A HOUSEMASTER'S CASE-BOOK

it was conducted in an unusual way, by their both belabouring a third party—myself. I don't think the principals ever met again after that Speech Day, nor did they write to each other. But at least once a term, and sometimes in the holidays, I received expostulating letters wherein each mother ascribed some deterioration in her son to the influence of his study companion.

'It was a great shock to my husband and me,' Mrs Travis wrote, with elegant scrawl on heavy crested paper, 'that Richard's report for English said he might do better. English used to be one of his favourite subjects before he had a study . . .'

Then Mrs Mariner, on ruled lines: 'Mr Mariner and me is becoming very disturbed by our Sidney's Lah De Dah way of talking which he never use to making all our friends joke at him . . .'

Mrs Travis again: 'It cannot be right for a boy like Mariner to take advantage of Richard's generous disposition by sponging on him all the time—and it is most undesirable that Richard should live in such an atmosphere . . .'

And Mrs Mariner: 'One thing I must drawer your notice to Mr Barnes and that is Mr Mariner and me dont feel its right for Sidney to get extravergant habits not seeming to know the value of money any more . . .'

And so on. The best policy seemed to be to write placatory replies and let the boys continue to educate each other.

The two fathers, meanwhile, though quoted so often as fierce supporters of the views expressed by their wives, remained strangely inactive. On the rare occasions when I saw them they took a very detached view about the matters of complaint. Mr Mariner actually winked when he referred to them: Mr Travis produced the same impression more urbanely. And the boys, frustrated in their efforts to add amenities to No. 5 study, transferred their activities to the Wireless Society and became deeply involved in the making of a wireless-set.

IN the next summer term both boys took the School Certificate exam, Travis hoping thereby to secure his entry into Oxford. He had boldly suggested, much to his credit in my view, that Mariner should stay at his home in the summer holidays. Both mothers reacted strongly, but as the fathers took the

view that the boys were old enough to decide for themselves, the visit was duly made. I had no unprejudiced source of information as to how it went off.

The result of the exam came out at the end of the holidays. Mariner gained a very creditable certificate; Travis, who was no linguist, failed in Latin and French—both necessary for his Oxford entry. His failure produced the longest screed I had ever received from Mrs Travis. The good lady was positively violent about this consequence of a disastrous association, which she had long foreseen and foretold. If Richard could not retrieve his failure at the next attempt, the responsibility for keeping him out of Oxford, and so blasting his career, would rest firmly at my door. As a matter of fact, Mariner was far more industrious than Travis, and his influence in the matter of work was undoubtedly good.

I little thought, when Travis took the exam again next term, what a shock to my complacency was in store, and how amply Mrs Travis's fears were to be fulfilled—even if the manner was something which not even she could have foreseen.

The examination was held in the Lecture Hall in the main school buildings. In the same corridor was the Wireless Society room, where Mariner and Travis now spent much of their spare time. For several years the invigilator of the exam in the Christmas term had been a retired master whose hearing and eyesight were no longer what they had been; and the boys had some reason to suppose that the invigilation in this term was not always conducted with a rigour befitting an important public examination.

I went along to the Lecture Hall one evening at the end of a session to collect some surplus history papers from a previous exam. It was a half-holiday and only the candidates had been in school. Brindle, the invigilator, was still tying up the scripts.

'What paper have they had?' I asked him.
'French translation,' he said. 'Have you any boys sitting?'

'Only one—a boy called Travis.'
This seemed to wake an echo. 'Travis?' he repeated. 'Yes, that was the boy. I noticed his paper especially. Look at this.' And he picked one of the scripts out and handed it to me.

It was obvious to the most casual glance that the boy had failed miserably. He had

CHAMBERS'S JOURNAL

done little more than a third of the paper, and that was mostly incoherent nonsense.

'Not done much, has he?' said Brindle. 'And I can tell you why. I happened to notice the boy—he was sitting over in that corner. He seemed to spend his whole time playing about with a pencil-box. I went down to have a closer look and he was then writing hard. Just to make sure, I had a look in the box. It was full of pencils, rubbers, and things—what one would expect to find in a pencil-box. The boy was just playing about and wasting time.'

It was all most depressing. Another failure was certain—and more letters from Mrs Travis. I sent for the boy and told him what Brindle had said—that he was playing about and wasting time.

'I'm sorry Mr Brindle thought that, sir,' he said. 'I found the paper very hard.'

After Chapel the next morning Raynes, the master who had the Wireless Society under his wing, remarked to me casually: 'That boy Mariner of yours seems a queer card.'

'Oh? What's he been doing?'

'I was in the wireless room yesterday and he was there working away at his set. I noticed he'd got a French dictionary open beside him, so I asked him what it was for. He seemed a bit embarrassed and said: "Oh, I was just learning some words." From the way the other boys looked I rather felt there was some funny business going on.'

'What time was this?' I asked.

'Soon after five yesterday afternoon.'

Matter for thought indeed! A French dictionary, soon after five, with the wireless room almost next door to the Lecture Hall—was it possible that No. 5 study had found a new outlet for its ingenuity? I took the first opportunity of examining the Lecture Hall more closely. For any communication with the wireless room there must have been a cable, and a cable could only have come through the door or one of the windows. On examining inside the window nearest Travis's desk, I found two holes such as would be made by a small staple; and similar holes appeared on the moulding running above the dado. No. 5 study had evidently surpassed itself.

I sent for Travis and told him to bring his pencil-box. It was a quite harmless-looking box, full of pencils and instruments. I took these out and found two small holes in the bottom. I asked Travis what they were for.

He examined them with surprise and interest. 'Must be for ventilation, I imagine, sir,' he said brightly.

Then I sent him to fetch Mariner. They came in with guilt writ large all over them.

'Tell me, Mariner,' I said, 'why did you take a French dictionary into the wireless room yesterday?'

The two exchanged glances, and I could see that they had agreed to confess at the first hint that I was on the right track.

Travis answered the question. 'I asked him to help me in the exam, sir.'

'No, sir,' Mariner interposed rapidly. 'I suggested it first. It was entirely my idea, sir.'

They had made a cable connection from the wireless room to Travis's pencil-box, inside which, concealed under the pencils, was a small electric-bulb and a spring-lever. When Travis wanted to know the meaning of a French word, he spelt it out in Morse—they were both Morse adepts from their Signals training—and Mariner flashed back the answer. As anyone could have forewarned them, the result was disastrous. Travis wasted so much time messing about with the apparatus that he had practically no time for serious work on the paper.

I passed the matter on to the Head. He punished both boys fittingly and made a report to the Examination Board, who cancelled all Travis's papers. This was the end of his aspirations for Oxford—he never tried the language papers again.

I am not normally in favour of cheating in examinations, especially public examinations; but somehow I could see past this cheat and sympathise with the underlying adventure, the feeling of brotherhood-in-arms against superior forces, and the sense of creative achievement—all factors, it may be said, in many a criminal enterprise, but they don't make the enterprise less criminal. Perhaps not. Yet Mariner's pathetic, blundering attempt to help his friend was in some way touching; and it is rare to have that feeling about crime.

On two points I was quite determined—that Mariner and Travis should share a study as long as they wished and that neither Mrs Travis nor Mrs Mariner should ever learn from me exactly how Richard failed his School Certificate the second time. If I may judge from purely negative evidence, they never learnt from anyone.

Silver Greyhounds

The Corps of Queen's Messengers

A. T. HENLY

THE Queen's Messengers, forty picked men, carry secrets which may decide history. They take diplomatic bags from the Foreign Office to British embassies and legations all over the world. An unguarded moment, and secret documents may be stolen by the agents of a foreign power, codes will become useless, and peace perhaps endangered.

Strangely enough, no Queen's Messenger is ever told why he has been chosen for the job. Any officer in the services could receive a letter from the Foreign Office offering him the appointment. If he accepts, his life is no longer his own. He must live within an hour's journey of Whitehall, and be ready with a toothbrush and razor to go at short notice on astounding journeys.

Apart from those based on London, there are usually twenty-three based abroad. There are four each in Washington and Hong Kong, two in Madrid and Ankara. Others are in Rome, Santiago, Rio de Janeiro, Vienna, Belgrade, Singapore, Shanghai, Warsaw, Rabat, Berlin, and Moscow. Even a routine trip for a London Queen's Messenger can take him as far as Santiago, via Lisbon, West Africa, Brazil, Uruguay, and Buenos Aires—and back again, in a matter of twelve days.

THE Queen's Silver Greyhounds are the exclusive badges of these men. When Charles II fled to the Netherlands, he had to appoint trustworthy messengers to carry his secret papers. He chose two Englishmen and two Dutch trawler captains. From a silver porringer he broke off four identical greyhound ornaments, which became their badges of recognition. When he eventually regained his throne, the greyhound badge as it is known to-day was first designed.

The badge was once worn exposed, so that all should know the Queen's Messenger. The silver greyhound is suspended from an oval medallion, with the royal monogram in gilt on a blue ground. The motto of the Order of the Garter—*Honi soit qui mal y pense*—surrounds it. To-day, the badge is carried discreetly in the pocket, and even the distinctive modern tie of the Service is no longer worn. It was found to be too much like an R.A.F. tie.

After the time of Charles II, until the coming of the Hanoverian kings, the Messengers had strange duties. Arresting people for high treason, collecting money due to the crown, dealing with breaches of the peace, and running odd errands for the King were all part of the job. The headquarters were once in Hanover. But in 1772 the Queen's Messengers were made a separate Service from the general 'Royal Errand Boys', as they called themselves. The Foreign Office then organised the 'Corps of the King's Foreign Service Messengers', which is the correct style to-day—except for the change of one word to 'Queen's'.

The main qualifications were then to be able to ride on horseback, shoot straight, and speak three foreign languages. In 1849 Colonel Townley made the greatest ride in the history of the Service. He rode from Belgrade to Constantinople, a distance of 820 miles, in 5 days 11 hours. But this was a record for speed, not distance. When Napoleon escaped from Elba, a Queen's Messenger rode 2000 miles across rough country in just over two weeks to report the fact to the Persian government.

THE diplomatic mail consists of more than one small despatch-case to-day. It may be anything up to twenty sacks bound for one embassy from the Foreign Office in London.

CHAMBERS'S JOURNAL

Here, the scene is very much like a post-office sorting-room. Parcels are received for embassies all over the world, for their staff are entitled to order from home anything they need, and it travels by diplomatic bag, unexamined through foreign Customs.

Strange things have gone by diplomatic bag. On one occasion, eggs of a rare moth were sent out to a Balkan king. On the journey they hatched out, and the Queen's Messenger had to hunt the caterpillars in the train. Canaries have been sent as a gift to a Sultan. But perhaps the most astounding thing ever to reach the Foreign Office to travel 'per favour of bag to Pernambuco' was—a grand piano. Other arrangements had to be made that time.

After the days of rough-riding across the world came the crack continental expresses, with private compartments for the Queen's Messengers. To-day, however, the Queen's Messenger spends half of his life in the air. The journeys are ever increasing. Major Alfred Custance covered 120,000 miles in the period 1914-18. But Sir Henry Johnson, who retired from the service more recently, travelled 1,135,000 miles in eight years. He had spent 6500 hours in the air as a Queen's Messenger.

THE Messengers are no longer 'cloak and dagger diplomats', expecting to be taken by foreign agents or tempted by beautiful spies. But many adventures came to Queen's Messengers in the past.

During the Franco-Prussian war a Messenger was taken by the French and threatened with execution. He told his captors that he intended to hold the diplomatic bag over his heart, so that the world should know when the bag was recovered that he had been killed.

On another occasion a Messenger fell into the hands of Mexican robbers, and the diplomatic bag was stolen. He threatened suicide, so that the bandits would be hounded down by their own government.

On a journey across Siberia in hard winter weather a Queen's Messenger had the coach in which he was riding attacked by wolves. The driver was killed, the horses torn to pieces, and no ammunition was left. When the Messenger as a last hope blew the post-horn, he was saved by woodcutters from a near-by forest.

In the First World War a Queen's Messenger was in a ship stopped by a German submarine. Rather than let the enemy get the diplomatic bag, he threw it overboard, only to find that it floated. Since then, all bags have been weighted with lead. To-day, the adventure of the job is almost over. Even so, strange things can happen. During the recent war Sir Henry Johnson had great difficulty in avoiding the attentions of a woman spy in Buenos Aires. She was the widow of a German officer killed on the *Graf Spee*.

Lt.-Col. S. G. Cutler, a retired Royal Marine officer, was accused by a Russian newspaper, just after the war, of being concerned in the attempted theft in Moscow of a small gilded statue known as the 'Venus of Moscow'. He was front-page news in every newspaper in the world.

There is no fortune to be made as a Queen's Messenger. Pay starts at £600 a year, rising to £810 in six years. The life is an arduous one, and few continue for long, as illness or lack of stamina forces many to retire on a small pension. It is a life of 'silence in five languages', as one of them said. All the time they have to remember the motto of the Corps—"The shortest way in the shortest time."

March

*Her hood is of the heavy cloud,
Her cloak of driving snow,
Her face as bitter-keen as frost,
And, striding to and fro
Across the early-stirring earth,
Her cudgel in her hand,
She beats down every tender blade
That lifts above the land.*

*Old woman of the cruel heart,
Whose blows so fiercely strike
At sprouting root and budding shoot,
In field and waste alike,
Give up this wild, unequal task,
This war you wage alone,
The young, triumphant hosts of Spring
Come proudly to their own.*

ELIZABETH FLEMING.

A Water-Gipsy in the Pacific

R. N. STEWART

IN Prince Rupert, British Columbia, we had bought a ship. Her name was the *Vaquero*. She was not very large or very new, but she was sound in hull. Forty feet overall, fully powered, half work-boat and half cabin-cruiser. The engine was an early-vintage Buffalo and well befitting its name, having remarkable reliability and reserves of power. Yet it could be more damnable difficult to start than any other motor I ever handled. It nearly broke my heart. When I say that it had four cylinders of a bore of five inches and a stroke of six inches and that the only method available to start it was to swing the flywheel by hand—well, you will understand. For the more technically-minded, I may mention that it had square tappet-rods—a mechanical detail which dates it more surely than could any other description.

We had bought the ship because it was the cheapest way to live and made us independent of other forms of transport. Besides, there were faint possibilities of sea-scavenging which sounded alluring.

For some few weeks after we had fitted out the *Vaquero* we lived an idle and rather pleasant life. We pottered around the various creeks in the neighbourhood of Prince Rupert, fished, explored a number of unfrequented corners, and became familiar with handling the ship. This was just as well. Though we ran few navigational risks, we did at least have one narrow escape from complete disaster.

When we bought the ship, we had been at some pains to make a survey of the hull, but the rest of our inspection had been perfunctory. Where we slipped up was over the fuel-tanks, of which there were three. The normal working tank was sound enough, but there were two auxiliary tanks each holding 100 gallons of petrol. These we had not examined. One day we planned a rather longer trip and

decided to fill all the tanks at the 'gas' float. I do not now remember which of us it was that knocked over the lit primus stove in the galley, but, anyway, it fell and started a small fire. Fortunately I was able to extinguish this quickly, and then I smelt petrol. The two auxiliary tanks were riddled with corrosion holes and the 200 gallons they had contained were by now swilling about in the bilge. Just why the ship did not explode or go up in a sheet of flame, I do not know. By all the laws of combustion it certainly should have, and there is no doubt that if it had we should have gone up too.

We returned to Prince Rupert and had to buy two new tanks. Costly as they were, we were glad to pay the price in thankfulness for a very narrow escape—after all, it had been our own fault.

We spent about a month in cruising and a very enjoyable time it was. Then we woke up to the fact that it might be as well to try and earn a few dollars.

WE had heard that there was money to be made in salvaging logs. In this part of British Columbia the system of logging on the coast was that an individual acquired a licence to fell. He then hired two or more men and went to his allotted area and felled his trees. Due to the nature of the ground, he selected only those trees he could slide into the sea after they were felled and snedded. A felled tree, once it was in the water, was anchored until a sufficient number were afloat to form a raft. The raft, when built, was then towed to the mill. Now, it often happened that single trees broke away from their anchorage and drifted out to sea. These trees were big, some of them over 150 feet long and 6 feet diameter at the butt. They were conifers, so floated well. There was a

CHAMBERS'S JOURNAL

market for salvaged logs, and it ran to about ten dollars a tree, so if you were fortunate enough to find any of these logs adrift and not too far away, there were some pickings. This trade sounded to us to be right up our street.

Of course, we were very innocent. We did not know what salving a log meant. If you really want a difficult problem, I can recommend a 150-foot log which in a tideway with a cross-wind you have to secure and then tow to harbour with a forty-foot boat which is undermanned and underpowered for the task. To start with, it is no easy matter to make the log fast. Not only do you get very wet doing it, but it takes a lot of rope. Then, once having secured the log, to steer it and the ship becomes a problem. The damn thing just goes the way it wants to. If you tow it, you run a grave risk, in a following sea, that it will take command and that several tons of sodden timber will come charging at your transom—and one blow from such a battering-ram will undoubtedly sink you. If you lash yourself alongside the log, the combined body of ship plus log is quite unsteerable—at least it was with the power and type of rudder we had. However, we did salvage a log or two and received our reward.

Then one day my partner said: 'Look here, we've been lucky, but it can't go on. Hadn't we better change our trade?' There could be no doubt that this was the counsel of wisdom. We had no wish to drown ourselves or to die of a fluxion. So we gave up logs.

I FORGET now what rumour made us go to Ketchikan. Anyway, we did, sailing up the coast of British Columbia and over to Alaska. On this coast it is possible to sail for over a thousand miles in sheltered water in any size of vessel. There is deep water all the way. There are just three openings exposed to the full blast of the Pacific between Vancouver and Skagway. We had to cross only one of these—Dixon Entrance. We were fortunate in the weather. The sea was calm and we had a gentle favouring breeze. We followed the coast, turned in to Port Simpson, dodged the tide-race at the mouth of the Wark Channel, and then cut across to the Alaskan coast.

Ketchikan is a nice little town. All the time we were there the sun shone, and I can remember few places with a pleasanter

aspect—the neat tidy houses, the clean seaboard, and the magnificent tree-grown hills behind.

It has an important fishing-industry, both of salmon and of halibut. The main fleet of halibut boats are well-found little craft. The fishing is by long-line, and on a single line there will be about one thousand hooks. When the line is lifted, this is done by a power-driven winch. Obviously a line with a thousand hooks, each with a 300-lb. fish on it, is not the sort of load to lift by hand.

However, during the halibut season a number of individual fishermen work short lines in and around the waters of Ketchikan as a seasonal and part-time employment. The trade is profitable, and a man with a rowboat and a line of fifty hooks can, during the season, make as much as twenty dollars a day.

A halibut hook is a formidable weapon. It has a length of from $2\frac{1}{2}$ to 3 inches and a gape of about an inch. On the short lines used by individual fishermen there are some fifty hooks, each whipped to a snood of from 3 to 4 feet in length and spaced at about 6 feet apart. The hooks are baited with herring or other fish and the line is shot with a sinker at one end and a buoy at the other. It is left on the fishing-ground for 24 hours and is then lifted and the catch taken to market.

Guided by a friendly fisherman, we went to see one of these lines in operation, for we thought it a good idea to investigate the possibilities of the line-fishing and to find out how it was done. On arrival, we saw the occupant of a boat in distress, so we went over to him and discovered that he had been most terribly injured. His left hand was gone and the rest of the left arm grievously lacerated. Here was an emergency, so without questioning him—indeed, he was in no condition to answer questions—we took him aboard and made all speed for Ketchikan.

Later we found out what had happened. In lifting a halibut line the drill is to start at the buoyed end, then, as each hook comes up without a fish on, it is carefully laid aside and the main line coiled down in the boat. If, however, a fish is hooked, the line is hauled up till the fish comes to within about eight feet of the surface, when the fisherman takes a round-turn of the line about a thole-pin or cleat. This is essential. A halibut comes up quite quietly till near the surface, then he fights, and, as he may well be 300 lb. or more,

A WATER-GIPSY IN THE PACIFIC

he is far too strong for a man to hold without the round-turn on thole-pin or cleat.

In this case what had happened was that, being in a hurry and perhaps excited, the man was careless and forgot the round-turn. The result was that when the fish ran it tore all the line with the hooks already aboard through the man's left hand—perhaps twenty of them. He was very lucky in that he was not dragged overboard and drowned. As it was, he lost his left arm by the elbow.

We now gave up the idea of fishing, not because of the accident, but because the *Vaquero* was in no way a suitable ship for the purpose. Even if we had caught fish, there would have been nowhere to store them except in our bunks or the galley, and neither place seemed very suitable to me.

IT might be thought that just cruising around as we had done was expensive, but at this time the price of 'gas' was 16 cents the gallon and we were able to catch fish and shoot the odd duck, so we did not spend much money. Besides, we did some little odd services of portage and salvage, for which we received gifts in kind, sometimes food, sometimes paint or other useful commodity, and we lived very well.

This pottering about was all very well for a time, but it added nothing to our income. We went south again, then, to the Wark Channel. This channel is a long fiord with a narrow entrance through which the tide rushes at about nine knots, raising a considerable sea when the tide-flow is at its greatest. On the British Columbia coast the rise and fall of the tide is over 30 feet in places, so a lot of water has to pass this narrow opening. For small ships like ours it is wiser to wait for slack water before attempting the passage.

We made the entrance without incident and went on up the fiord. On the east side, about halfway up, there is a very pleasant sheltered cove where we planned to stay the night, and it was here that I did a really stupid thing—in fact, I sank the ship.

What happened was that I put her too far up in the cove on a high tide and had not calculated the amount of fall there would be at low-water. We anchored in about two fathoms and went to bed. I woke up with a curious feeling that something was wrong and was amazed to see the angle at which the ship was lying. She was nearly on her beam-

ends. When I woke I could not at first think what had happened, but a hurried glimpse on deck made it plain. We were almost high and dry. It was unfortunate that it had happened at night, because if we had grounded by day we could have got her off or, at the worst, got a couple of legs down and propped her up. As it was she was too far over ever to right herself with the rising tide.

Realising the extent of the disaster, we salved what we could of movable stores and effects, rowing them ashore with the dinghy, and watched the tide come in and submerge the ship. I think I had hoped that by some miracle she would right herself. Foolish as I knew the hope to be, we did try to move her with the dinghy when she was half-submerged, but such efforts were quite futile, and it became obvious that we should have to have help.

WE were some distance from any habitation. The nearest we knew of was at the mouth of the Wark Channel, about 15 miles away. Accordingly we cached the stores we had ferried ashore and set off in the dinghy.

At the mouth of the cove we came across one of the salmon-cannery boats, and we hailed the skipper and told him of our troubles. He was very nice and sympathetic. He gave us a hot meal and presented us with a salmon. Just what he thought we could do with the salmon I do not know, but as a gesture of friendship it was gratefully accepted. He was sorry that he could not give us a tow as he was headed for his pack-boat, which was further up the Channel. We went on, then, with our long row.

It took us some hours to get to Flewin's store at the entrance to Wark Channel, and we were very tired when we got there, having had to buck the tide for some time.

Flewin was a grand person, young and only too anxious to help. He gave up doing whatever he had been at and said: 'Now, you two, have a good sleep. I'll get my boat ready and we'll start at 2 a.m.'

Before sleeping I made out a list of stores and tackle I thought we would require, and fortunately Flewin had everything in stock.

We slept in Flewin's store. I have known better places to sleep in, but I am ever grateful for his hospitality. We were on our way back to the *Vaquero* by 2.30 a.m.

CHAMBERS'S JOURNAL

The first problem that faced us was to drag the *Vaquero* further up the beach while she was fully submerged. This meant waiting for the tide. The idea of the first drag was to get the ship so far up that we could bail and pump her without the fear that she would refill with the next rise of tide, and we could neither bail nor pump where she lay. I had thought that it would be difficult to move her, but this was not so with the aid of a line and tackle made fast to a tree ashore, and we drew her well up on a sandy patch and waited for the tide to fall.

Then we bailed. At first it had to be done by bucket alone, as the pump was still submerged too deeply to allow us to work it. Inboard on the *Vaquero* the mess was indescribable. Oil, petrol, and bilge-water mixed with clothing, blankets, and every other conceivable store. We dare not smoke because of the petrol, and it took some hours of bucket work to get at the pump. Once the pump and its suction-pipe were cleared, we made better progress. One of us worked the pump and the other two the buckets. We changed round each hour. At first we had to work continuously for fear of the rising tide, but after the turn at high-water we could take a rest. The *Vaquero* floated again at noon the following day.

DURING the salvage operations the *Vaquero* had started a couple of planks, and she was leaking—in fact, she was making water rather fast, and this meant almost continuous service at the pump. However, we could keep the leak under control, but it was clear that we had to get the ship to dry-dock fairly soon.

The nearest dry-dock was at Prince Rupert, about seventy miles away, and we made plans to tow her there. Flewin was willing, so we reloaded the stores we had put ashore and set out. The passage was a good one, though during it there was no time for rest. Flewin conned his ship, one of us steered the *Vaquero*, and the other worked the pump. We arrived at the dry-dock at 3 a.m. the following morning.

The dry-dock at Prince Rupert is a grand

affair. It is a floating-dock. It takes ships of 10,000 tons and it is not lowered lightly. The foreman of the dock was a friend of mine, so on arrival I went to his house. Naturally, he was abed, but I thought that my emergency justified my awakening him. I suffered the protests of his lady wife and said: 'Look, John, my ship is alongside your dock and she's sinking fast. As you know, there's 150 fathoms of water just at that place. What can you do to help me?' To his everlasting credit, and let me not forget the urgings of his wife, once she knew the story, he got up and said: 'All right. Keep her afloat for an hour while I get the dock down.' By 6 a.m. the *Vaquero* occupied an honoured place right in the centre of that enormous dock, just as if she had been a trans-Pacific liner.

Well, they repaired her. She was made fully seaworthy again, given several coats of new paint inside and out, her engine overhauled, new saloon cushions fitted—to tell the truth she hardly knew herself after all the tailoring.

When I saw all the work going into her I trembled for the account I should one day get. After all was done I went to the office and asked the manager for my bill. He looked at me and smiled. 'Would 300 dollars be all right?' he asked.

'What?' I said.

'Well, you know, we usually charge a lot more than that.'

'Do you mean for everything?' I asked.

'Why—yes,' he said.

I had been expecting something about 6000 dollars, so now I never let anyone say ship repairs on the Pacific coast are dear. Nor are there many other places which would produce such friends.

And Flewin? Flewin had worked himself to the bone for 22 hours a day for four days, given up his home, fed us, and given every hospitality to two strangers. When I asked him what I owed him, he said, rather shyly: 'Would 100 dollars be too much?'

Yes, it's thanks to Flewin and the Prince Rupert dry-dock that the *Vaquero* sailed again. She did, and she served her careless owners well, however badly they treated her.



A Day Off

BETTY SINGLETON

LOOK at old Dick now, as dry and puckered as a sloughed snake's skin, working his way through his cheese sandwiches. Len and Art were about as bad—not an idea in their bald heads between 'em. It was the same old sandwiches that Ma makes, followed by a brew and a few draws at a fag; stub it out and stick it behind your ear again, then work, work, work.

He was different. He liked to put both feet up and sit around and talk. It showed the boss, didn't it? These silly old coves, when they wasn't working, couldn't think beyond a prize carnation, or which team will win on Saturday, or what the old woman's going to put on for tea. Now he was buzzing with big things. When that chap in Hyde Park thundered about the poor wage slaves, and how they ought to all band together, cannons went off in his head. He liked to listen, pinned in the heart of the crowd, warm and squeezed and matey. When they broke up, he marched away in an invisible army on a choking tide of power.

It was funny he couldn't remember all them grand things when he got back to the digs—'Workers of the World Unite!'—that was it—who said he couldn't remember? 'Workers of the World Unite!' It was cosy and com-

panionable-like, made him feel he belonged to somebody, something repeated over and over again, just as Dad used to say in the old days, 'If you don't shut that blooming door, I'll skin yer!' It made him warm and happy, until it wore off and he was lonely and miserable again, thinking of all his family up at Nottingham, and how the old geezer of a landlady created if he sang a bit, just to cheer himself up.

He was sick for the company of some noisy, young chaps like himself. All the men he worked with were old. 'Workers, throw off your chains!' He had tried the Hyde Park stuff on these poor bigheads more than once. But they might be toothless babies, like the celluloid dolls they turned out day after day, for all the notice they took. Grin at him, they would, then start up again about their blooming carnations and things, except that now and then old Len would scratch his head and say: 'Oh ay. Them's marvellous chaps. All out ter kill the boss, and the eggs with him!'

'You don't connect!' he told them bitingly.

The little workroom, with its rows of staring dolls, as pink as new-farrowed piglets, and the bloated coloured ducks, was cold and comfortless, except near the hot-plates.

CHAMBERS'S JOURNAL

The boss didn't eat his sandwiches among that lot, notice. Trust him to get away into that snug corner office with the oil-stove, and a bottle in the drawer, most likely. 'Workers of the World Unite!' But were these old codgers worth saving? Ask for a rise, or a day off to get away from those sightless lumps of pink? Not them! All they could say about the boss was that he was 'all right'. *Bust them!*

'You don't connect,' he said to Len's grin. 'He's Capital—we're Labour, see? He's getting fat on our sweat. You don't know your value. You've got to explore it—exploit it, I mean. Hold it back, and up goes your price.'

'You'll get the cramps, son, eatin' like that with yer feet up,' observed Art.

Old Len drank his last dreg of tea and wiped his moustache. 'Old it back? Come on, what for?'

'Haven't I told you? Things too easy to get lose their value, see? When you strike, you show 'em.'

'Show 'em what?' said Art, with the air of a green pupit.

'That you knows what you're worth and you're going to hold out for it and—'

'Leave the lad alone, Art,' grinned Len, moving to his table to resume his painting in of bright-blue and grey eyes.

Tom had not been aware of being trailed, and reddened with rage. Bigheads! A step behind him made him start. How much had the boss heard? He wasn't going to be scared by any blooming Capitalist—weren't his two feet still up on the bucket to prove it?

'Ain't young Tom too well?' asked Mr Brown mildly.

'Got a touch of the cramps, I expect,' said Dick, to cover him up.

'Here, I don't want no one speaking for me!' Tom's heart thumped, but he was no coward. March on—over the necks of the dirty orange-squeezers. Had the old so-and-so heard him?

'If the boy's got cramps, he'd better lay down,' said Mr Brown. 'Hang on, though, Tom, I've got something to say.'

The push! So he had heard.

'I've bin thinking,' Mr Brown said, 'like as how we'll shut down tomorrow, and have a holiday.'

'Holiday!' said Len, his mouth agape. 'Whatever for?'

A carefully extracted a completed doll from the press and laid it aside before remov-

ing his spectacles to stare.

Tom's feet came down with a crash. Had the old man gone soft? Or was it some monkey business—that bloke in the Park had warned them of the tricks the Grinders got up to.

'What's gorn wrong?' asked Dick bluntly. 'Business ain't bad?'

Mr Brown grinned and shook his head, which made Art and Len and the others frown and look more worried than ever. 'Gor! If business was bad, we'd work harder. Don't no one want a holiday, like me? I'm handing it you on a plate.'

'I do!' said Tom loudly. 'It's every worker's right to have a bit of time off now and again—with full pay, of course.'

'Full pay it'll be. Len, Art—you chaps—ain't you goin' to say thanks, like young Tom here?'

Most of the men mumbled something. They looked puzzled and vaguely disturbed.

'Well, that's that,' said the boss. 'Don't let the Missus find you jobs to do, either—take out a rod, or what you fancy, and enjoy yourselves.'

TOM'S mood of triumph lasted all night. He'd given the boss something to think about. He stayed in bed till half-past nine and got up with a slight headache, through going without breakfast. It was all right, reading the paper without an eye on the clock, then sauntering out into a street full of women and kids to stare in shop windows. He wasn't much of a one for drinking, but he had a call at the 'Three Feathers' in mind. Two hours to wait—what did chaps on the loose do in the mornings? This was leisure, the aim of humanity, this was life. He had won time. Time for what? Oh well, hundreds of things.

He strolled through one or two departmental stores and out again into the raw day. Where could he go? Back to the digs and bed for a smoke? The old geezer there wouldn't like it. The library? That was warm, and they kept a few light magazines. They kept Karl Marx and Engels, too, but somehow he wasn't in the mood.

The library was warm enough, but full of old men coughing over the gas-fires. He stayed ten minutes. Who said he was bored? It was only that Art or Len might turn up, and what a mug they would think him, bawling for freedom just to read a picture-

A DAY OFF

magazine, which he could do every bit as well at the dentist's.

The 'Three Feathers' was better. You could talk. Anyhow, you could listen, to the old man in the corner going on like a gramophone about his inside, or the two women nattering about some blower they knew who'd said something to somebody else. That was the worst of it—you wanted a pal for a day off. You got to thinking all about that feeling of loneliness and missing the house back in Nottingham with six noisy kids of your own age and the marge laid on with a shovel, and Mum and Dad calling and pushing each other and not meaning a single word of it.

He'd have some grub and drop into the pictures. Later, he might go to the Dogs. At the Regal they were showing that rotten tropical thing he'd seen. He gave the poster a kick on the girl's bare midriff. The truth was, he was getting into a bit of a temper. Beer didn't suit him. He'd only had a couple, but he felt lower than ever. What the heck was there to do? What about the park round the corner? There were kids there. He liked watching kids. The way they bawled and shoved each other was homey.

There seemed to be a lot around. The little beggars swarmed like ants over the swings, but one girl, about nine years old, sat on the seat he dropped on, crying to herself.

Crummy! He'd burst into tears in a moment! She was real ugly, too, with a snub-nose, and held a bundle against her, shrouded like a corpse. She kept screwing her fist into her eye.

'Come off it, what's up?' he said irritably, to cover his sympathy. Kids shouldn't cry, any more than animals should whimper. It showed the world wasn't treating them right.

The kid scowled and scooped the bundle closer. Crummy, what was it—a dead cat? A favourite they'd had to do away with, he supposed.

'All right! I ain't going to touch it. Here, don't let poor pussy upset you,' he said, with an attempt at facetiousness. 'Mum'll give you another, a prettier one.'

'Who says it's a *cat*!' said the child passionately. 'It's Maudie—look!' She snatched away the covers and revealed a doll with a smashed head, a lump of china stuck with a wad of hair lolling to the shoulder like an epaulette.

A boy, panting from his exertions on the

slide, ran near like a hot wind. He burst out laughing and pointed.

'Let me catch the shaver wot done it,' said Tom, moving aggressively on the seat. He looked at the object. The blooming doll was past any patching or glueing, but it might have been her first-born, the way she piped over it.

'Nobody done it,' she howled. 'I dropped it outer the window.'

'Gertcha! Dry up—Mum'll get you another!'

'She won't. She says I got too many. The others 'ud give me theirs, but them ain't babies—*them's* got thin faces and teeth and their knees don't bend outwards as they oughter.' She lifted the doll's clothes and he saw what she meant.

Pity made him put on a clownish air. 'Ho! If it's *babies* you must 'ave, you've come to the right shop. I'm a baby doctor, I am!'

'You!' She looked scornfully at his collarless shirt.

'Yeh! Doctor, that's me. I bring dozens of 'em into the world, week after week. They're born without eyes, like kittens, but we suit the customers, blue or grey, whatever they want.'

'You're ribbing!' she said furiously.

'I ain't,' he countered earnestly. 'Come to my hospitäl, if you don't believe me.'

She showed her teeth in a sneer that ended in a hiccup. But she got up and went with him.

WHEN they reached the shabby little building, she lagged behind. 'That your hospitäl?'

'Why not?' he said defensively. 'Come in and see!' He was thinking: 'It's all right if Charley makes a fuss!' But the doorkeeper was sleepy with stout and yawned as Tom gave him the tale about leaving his watch behind. Perhaps Charley thought the girl, who was called Jane, was his kid sister. Anyway, he let him in.

At the sight of the rows of pink, naked dolls Jane let out a scream. The dead doll trailed to the floor and she ran forward.

'Hey, keep your hands off them! That lot's booked to other mummies.' He had to pull at her skirt to get her away. 'We're going to make our own special one,' he told her. 'I'm a magic man, see—I can *make* babies. Watch me pull down a real peach for you, outer Heaven!'

CHAMBERS'S JOURNAL

'*You make a baby!*' she mocked, and showed the gold bar on her teeth.

He steam-heated the upper and lower dies in the press, and took two sheets of pink celluloid and put them on the hot-plate for a few seconds. Then he inserted them in the dies and got the blower working to mould them into shape. After this he put them through the cooling process. He could do this part of the job efficiently, though they would not let him touch the painting part. That was Len's job.

In a minute or two he was able to lift out the doll, shining like a lump of pink soap, its two halves neatly joined together. The kid turned pale with pleasure.

'Here's Screamet for you,' he said. 'He's blind yet. We've got to give him some peepers, and a bit of rose colour about the knees and elbows, like they all has.'

He carried the doll across to the table and took out Len's camel-hair brushes.

'Blue! The brightest you've got!' she cried, dancing about like a dervish.

'Blue it is,' he replied. Then he paused, with charged brush, perplexed. 'Here, let me look at you.' He gazed with puckered brows into the limpid eyes, fringed with the still wet lashes, then laughed at his own stupidity and went over to examine the finished dolls. Back at the table, he filled in the blue parts of the eyes, and blew on them to dry. That black blob in the middle was a regular basket to do. Len must be a wizard—how did he get it so true and round? Tom's black ran a little, giving young Screamet a sort of squint. He hoped the kid wouldn't kick.

'Oh, what a darling!' she almost choked. 'He's much, much better than the others!'

'Hold on. Give it a chance to dry.' He cleaned the brush, then took another and dipped it into rose, and gave the doll some glossy knees and elbows to get along with. He blew the quick-drying paint and handed

the doll to her. 'There. All it wants is a smack to make it cry!'

She peeled off the smashed doll's clothing and dressed the new one, in an ecstasy. 'Here, you can hold Maudie,' she said, handing him the naked casualty. 'I've got baby! And a darling, darling baby it is, and nobody's but mine!' She kept up her crooning as they left the building. Charley was missing. Funny! It only occurred to him then that he could well be called a swiper, to the tune of a couple of sheets of celluloid. So what? The kid's eyes were winking like diamonds.

'You've gotter come home, along of me!' she shouted. 'Ma'll want to know where I got baby from.'

'Who'll be there?' he said hopefully.

'Oh crowds—there always is. You won't get a chair, but you can sit on baby's pram if you like. You don't look as heavy as Uncle Ted.'

HE had to be early next morning, just to see that Len's brushes were all right. All the same, Len kept holding them up to the light, and blowing on the hairs like a monkey looking for fleas. 'Have to be just right. Must've got bent in the drawer,' he explained, catching Tom's eye.

'Clever, how you get that blob of black bang in the middle each time,' said Tom.

'You'll come round to it, by and by.'

'Tom ain't told us how he spent 'is day,' said Art, the wag. 'A hundred mile from here, I reckon!'

'My old girl spent it worrying what had come over the boss,' put in Dick. 'I hope he don't do it again.'

'P'raps he wasn't feeling up to much,' said Len.

'Ay, that's about it.'

And they fell to whistling a medley, in which Tom joined.

Two Prides

*When I was bright with youth's brave glow
And all my flesh was strong,
It was a pride to me to know
How seldom I was wrong.*

*But now the torches in my eyes
No longer shine so bright,
I'm prouder still to realise
How seldom I've been right.*

CHARLES KELLIE.

The Insect Story

D. A. TIDMAN

MAN, with his superior power of reasoning, has brought most wild animals under his domination, but the insect world still remains free. With the invention and use of DDT it was thought that at last science had mastered the insect, but entomologists have found that *Musca domestica*, the common house-fly, is already producing biological strains completely resistant to DDT.

The truth is that, compared with the insect, man is the interloper in the world. Every big group of insects at present known to science had already come into existence 300,000,000 years ago, long before man evolved from the ape. This is readily proved by the picture of the past presented by amber inclusions. Perhaps some 60,000,000 years ago the vast prehistoric pine-forests of the Baltic were dripping resin in much the same way as the coniferous trees of to-day drip resin. Some of those drips fell on to insects crawling or at rest on the forest floor, or on trunks and limbs. The resin fossilised and became amber, and the insects trapped inside were perfectly preserved and became fossilised too.

Insects embedded in amber are identical in every respect with those found in nature to-day, so it is obvious that they must have been evolving from their ancestral types many millions of years before the advent of the dinosaur or the pterodactyl.

Is it any wonder, then, that the insects, which had practically conquered the globe even before the saurians emerged from the waters on to dry land, should dispute our every step into their domain? Is it not reasonable that they should fight, and fight hard, for every inch of lost ground? We have won a minor battle here and there, we have driven the enemy back along a very limited front, but no major conflict has yet been decided in our favour. We are attacked on all sides. Our crops are ravaged at will, our domestic animals are

turned into mobile seed-beds for the rearing of the enemy's young, our stored products are devoured under our very noses and our fresh food is fouled. Even our persons are not inviolate. The insect hosts attack growing trees, render felled timber almost valueless by boring pinholes into the trunks, consume our papers, books, telegraph-poles, and furniture, and, in the tropics, they undermine our buildings with their subterranean tunnels and reduce to powdery dust the walls of the houses we live in. They have perfected the art of bacteriological warfare and spread disease from man to man, animal to animal, and crop to crop.

It is interesting to look, through the eyes of an economic entomologist, at the damage insects cause. In the United States the cotton-boll-weevil caused a crop loss of more than \$100,000,000 in a single year. In Brazil it has been estimated that the total crop loss due to insect attack is in the region of ten to fifteen per cent of total production.

WHAT is an insect? Simply, a creature whose body is divided into three well-defined parts—head, thorax, and abdomen. The head bears a pair of feelers or antennæ, and attached to the thorax are three pairs of legs and usually one or two pairs of wings. An adult insect never has more than six legs. It is an invertebrate animal—that is, it has no internal skeleton, but its body is covered with a very hard skin of chitin, to the inside surface of which the muscles are attached. All winged invertebrates are insects, but not all insects are winged! Although the entomologist is expected to deal with spiders and scorpions, these have eight legs instead of six and are not true insects, nor are centipedes and millipedes. Perhaps the most familiar representatives of the vast insect order are the

CHAMBERS'S JOURNAL

butterflies and moths, beetles, mosquitoes, plant-bugs, fleas, and lice.

The majority of insects are vegetable feeders, but many have become accustomed to the strangest of diets. *Anthrenus* is fond of feeding on ancient Egyptian mummies in museums, while *Dermestes* habitually eats dried hides, fur, and preserved insect collections. *Lasioderma* and *Sitodrepa* are cosmopolitan and do a great deal of damage to a variety of stored materials. The former attacks tobacco, certain drugs, and ginger, while *Sitodrepa* is inordinately fond of a meal of opium or aconite, but when these are not available will turn with relish to stored flour or dried biscuits.

Some insects grow their own food. The leaf-cutting sauvia ants of South America sow the spores of a certain fungus on the walls of subterranean chambers specifically built for the purpose. The mature fungus, carefully tended by gardener-ants, forms the sole food of the community.

The long, upward path of evolution, and the fierce and constant struggle for survival, has tended to make our insect the most versatile creature in existence, and it would be difficult to name any environment in which one species or another could not survive. Snow and ice, hot springs and parched deserts all have their quota, and the soil maintains its own population. There is also a true marine species, *Halobates*, allied to the familiar pond-skater, which sculls across the surface of the Atlantic. The highest distinction, however, must surely be awarded to a small two-winged fly which spends its immature stages in pockets of petroleum associated with the Californian oil-wells. To live, and thrive, in crude petroleum indicates the very highest degree of specialisation.

Certain insects, such as the flesh-eating Diptera, live as internal and external parasites in and on animals and man, and, like the ichneumons, in and on each other. Some of the larger predatory wasps hunt caterpillars and spiders and paralyse them with poison from their stings, then lay their eggs in or on the moribund victims, thus providing their young with an ample supply of live fresh meat. Others, such as the minute *Braconids*, do not even bother to paralyse their prey but lay their eggs directly in the living body. The tiny parasitic larvae hatch out within their host and immediately proceed to devour the living tissue surrounding them, carefully avoiding

any vital organ. When they are fully grown and ready to pupate, they kill their host and emerge into the open air by gnawing a hole through the skin.

BESESIDES man with his lethal liquids and powders, insects have many other enemies on their doorstep. Small mammals, birds, and reptiles, but particularly birds, are partial to an occasional or regular insect diet, and were it not for the power of natural selection and allied phenomena endowing the insect with protective devices the order might have become extinct before the first amber fossilised! Two of these devices are regeneration and mimicry.

Many members of the order *Insecta* have the ability to regenerate limbs lost accidentally or deliberately shed to avoid capture, and sometimes even new heads are grown! The legs of a stick-insect are very delicately constructed and incorporate a mechanism which permits them to be cast at any of the joints—the foot, the thigh, or the entire leg may be shed. Consequently, many a bird or small mammal has had to be content with a solitary limb instead of the whole insect. In a relatively short time, however, a new leg has grown in place of the one lost.

Very occasionally something goes wrong in the budding cell-tissue and, although the leg grows again, it grows in the wrong place. A Javanese stick-insect, picked off a jungle bush, was seen to have five legs placed normally, the sixth growing out from the back of its head. Such happenings are comparatively rare in nature, though not uncommon in the laboratory.

The injuries insects can withstand may be judged from a laboratory experiment conducted in order to isolate the hormone suspected of being responsible for the phenomenon of moulting. Two blood-sucking bugs of the genus *Rhodnius* were decapitated, and their headless necks joined together by means of a fine glass capillary tube, in order that the hormone of the one should circulate freely throughout the system of the other. *Rhodnius* bugs will live quite happily for a year after such an operation.

There are many types of mimicry. Some of them, when the 'model' is the background on which the insect rests, or the vegetation amongst which it lurks in wait for its prey, are known collectively as 'protective resemblance.' Leaves of trees and bushes, broken twigs on

THE INSECT STORY

the ground, stems of green plants, acacia and rose thorns, even bird-droppings, are mimicked so faithfully as to deceive the expert. In tropical South America one butterfly, a *Caligo*, when its wings are closed over its back, looks exactly like the face of an owl. In the coal-mining area of Newcastle, Australia, there is a gigantic moth belonging to the Swift tribe which, when at rest on a branch with its wings folded, very closely resembles the head of a poisonous snake common in that district.

True mimicry, and the peak of deception, is found among the butterfly fauna of Africa. The swallow-tail, *Dardanus*, is represented in Africa by a number of sub-races, all the members of which are tasteful to birds and other insectivorous creatures, and each sub-race possesses from one to six forms of the female which are mimics, faithful in every detail, of distasteful butterflies belonging to widely separated families. Again, in the Amazon region of South America live two widely separated families of butterflies, the *Heliconiidae* and *Ithomiidae*, and so many species of one family mimic species of the other family that these two groups have caused endless confusion and frustration to those systematic entomologists engaged in classification. Such methods of passive defence could be multiplied a thousandfold, but no review of the subject would be complete without at least a passing reference to some of the ways insects react to man's weapons.

THIRTY years ago the usual method of exterminating scale-insects ravaging the citrus plantations of California was by fumigating affected trees with the deadliest poison known to science—hydrocyanic acid gas. To-day new chemicals have to be employed, for resistant strains of scales have evolved which positively thrive on prussic acid! Likewise, the blue tick of South Africa, now known as the arsenic-resistant tick, laughs at the strong arsenical preparations formerly used to control it. In England that glasshouse pest, red spider, not quite a true insect, but usually classified as such, is already showing

signs of breeding varieties resistant to azobenzene.

With such a comprehensive armoury, albeit with weapons evolved and utilised unconsciously, it is clear why no advantage has been won in this war between all humanity and the insect armies arrayed against it.

YET, in spite of the conflict between insects and man, man could not do without the insects. Paradoxically, the world would be a barren place without insects, for agriculture and horticulture could not survive without them. They are responsible, mainly, for the fertilisation of our crops and trees and the flowers in our herbaceous borders. And certain species are of direct benefit. The silk-worm provides us with true silk, the secretion from the salivary glands of its larva; the bee gives us beeswax, used so extensively in industry and the arts, and the nectar it extracts from the flowers of the field, after undergoing a complicated chemical change in its stomach, is regurgitated to give us honey for the breakfast-table. From India comes lac, the substance which, when dissolved in spirit-solvent, is sold over the counter as shellac and which finds so many applications in the electrical field. It is produced by *Tachardia lacca*, a kind of scale-insect. Yet another type of scale-insect yields cochineal, the material once used by the Aztecs as war-paint and now employed in cake-decoration. To produce one pound of cochineal requires the bodies of no fewer than one hundred thousand insects!

Thus, although the invading hordes attack the roots of our crops, chew the leaves of our plants, destroy our fruit, and spread some of the most fatal diseases known to mankind, a certain section which may be likened to a fifth column provides us with the finest clothing, dyes, medicines, raw materials, and assures our agricultural population a livelihood. So we find ourselves in the somewhat strange position of having at one time to wage war against the insect world and at another to see in it the very creatures whose survival is vital to our own continuity.

The National Film Theatre

DAVID GUNSTON

NO one who visited the 1951 Festival of Britain on London's South Bank is likely to forget the Telecinema, one of the exhibition's major attractions. There, almost universal queueing was eventually rewarded by an excellent programme of the then marvels of large-screen television, stereophonic sound, 3-dimensional films, and so on. But unlike the Telecinema's loftier neighbour, the Royal Festival Hall, it was not originally planned to survive the 1951 exhibition, and but for farsighted intervention would have at length been demolished along with the rest of the architectural novelties that enlivened the South Bank for that memorable summer.

Most of the credit for the vision that saved the Telecinema and enabled it to become, as it now is, a lively part of the London, if not the national, cultural scene must go to the authorities of the British Film Institute. For years this body has been doing sterling work in furthering knowledge about the worthwhile fruits of the cinema, and preserving for posterity the all-too-fragile landmarks in the history of the film. But it lacked a fair-sized cinema of its own for showings for members or the interested section of the public and so remained, on the whole, out of touch with the everyday cinema-goer who cared for the young art and wanted to learn more of its history and its application.

Fortunately the management of the Telecinema had been allocated by the Festival organisers to the Institute, and, instead of letting the building fall to the breaker's hammer, the suggestion was raised: Why not convert the Telecinema into a national repertory cinema under Institute control?

By the greatest of good fortune, the excellent idea became reality. The B.F.I. directors managed to secure, as a start, a five-year lease from the London County Council and, equally important, a grant of

£12,500 from the recently-established Eady Fund. The building was completed, redecorated and fitted out as a continuously-operating repertory cinema, and in October 1952 the National Film Theatre started to operate.

It was the first time anything comparable had been seen in Britain—an expertly-organised national cinema devoted entirely to the best films of all and every kind, run on a proper commercial footing, yet not primarily for profit. The aim was to please the public as well as the purists, and, after two years of working, the experiment is plainly a success. Insofar as it has, ultimately, to pay for itself, the National Film Theatre is something unique in the world of films, and it successfully combines this efficient running with the best facilities for seeing rare, withdrawn, little-known, esoteric, and just plain old films offered by such places as the cinema of the Museum of Modern Art in New York and the Paris Cinémathèque.

THE National Film Theatre normally seats 400 people, and it is a striking example of bold, original modern architecture. Designed by W. W. Wells-Coates, O.B.E., its appeal to the eye is, as is proper in a cinema, almost entirely internal. Viewed from the road—and it is about the first building the visitor sees on leaving Waterloo Station to cross Waterloo Bridge, on the left-hand side—it tends to give an impression of smallness and restriction, and as it was built as part of the South Bank exhibition its foyer faces inwards, away from the road, but, viewed from a point facing its entrance, the clean lines and compactness of the light-grey building are most attractive.

Inside, the atmosphere compares favourably with the most modern commercial cinemas in the West End or anywhere else, but efficient

THE NATIONAL FILM THEATRE

pleasantness replaces blatancy, and the foyer lights do not try to dazzle and spotlight patrons. Perhaps regrettably, the thick glass panel in the foyer that formed the back wall of the projection-booth in the Telecinema, thus enabling patrons to see the projectionists and their equipment at work without interfering with showings, has been removed, but the other minor alterations have merely enhanced the place's attractiveness.

The decor is a tasteful blend of mahogany and chromium, of powder-blue and light-grey, and the interior design is noteworthy for the placing of the projection-booth between the stalls and the circle. This unusual arrangement proves most effective: instead of the projection-beam coming almost out of the ceiling at a steep angle to the screen, it emerges more or less horizontally across the auditorium, but those in the circle have an even better view than normally.

Now that the place is devoted solely to films, the television equipment has been removed, but the latest in standard projection apparatus (including, for the showing of films available only on that gauge, an extremely powerful 16 mm. projector), a brilliant glass-beaded screen and the existing well-planned seating, acoustic fluting of the walls, and sunken, star-like house lights ensure the highest standards in every direction. An interesting feature of the foyer and stairways is the display of frequently-changed mosaics consisting of large photographic stills from classic films of all nations, on which cineastes may test their knowledge and memories. There is now also a small but attractive licensed club adjoining the auditorium for the use of members of the Institute.

BY confining the shows on six days of the week to members and associate members of the Institute, the National Film Theatre gains the advantages of a private club in a fixed source of income irrespective of box-office takings, and, in addition, is free from the dictates of the British Board of Film Censors, who might well take exception to some of the programmes shown. On Saturdays, however, the Theatre is open to the general public, when specially-chosen programmes consisting of worthwhile films of comparatively recent origin are given after the manner of an ordinary repertory cinema.

Naturally, after the opening of the N.F.T.

and the announcement of its plans there was a rush for membership of the British Film Institute, which now enjoys the support of as many as 25,000 film enthusiasts of the more serious type. To cater for all, there is now in operation a scheme of associate membership at an annual subscription of only five shillings. This entitles the holder to attend all the shows at the Theatre at the usual seat prices. The full membership subscription to the Institute is one guinea, which covers a wide range of services as well as Theatre membership. For either of these ridiculously low subscriptions, anyone may see films long since discarded by the commercial cinema, including some relegated to the rubbish-heap, or lost in the welter of celluloid that has flowed from almost every civilised country during the last half-century.

The Theatre's first programme was a clever attempt to please all comers—the screen version of Shaw's *Pygmalion*, with Leslie Howard and Wendy Hiller, some 3-D experiments, and a specially-compiled anthology film entitled *The Stars Who Made the Silent Cinema*. This last provided 52 minutes of striking historic entertainment, featuring such players as Lillian Gish, Chaplin, Mary Pickford, Betty Balfour, Conrad Veidt, Harold Lloyd, Douglas Fairbanks, and Rudolph Valentino in extracts from some of their best efforts. Since then the N.F.T. has offered a feast of cinematic delight sufficient to cater for every possible taste and to whet almost everyone's appetite.

The week is divided into two series that run continuously—*World Cinema*, from Sunday to Wednesday, and *Fifty Years of Film*, on Thursday and Friday. The former is in the shape of fixed seasons devoted either to certain types of films, like Romantic, Musical, Western, Ballet, Comedy, or to the work of a chosen director or actor. Thus series have surveyed the development of the love-story film from Theda Bara to Marilyn Monroe, under the title *He, She and 'It'*, the surprising freshness of silent American comedy films, notably those of Buster Keaton and Harry Langdon, and the evolution of films devoted to the ballet, including a short, hitherto unknown film showing Pavlova performing a group of dances, shot in 1924. Others have examined the work of such notable directors as René Clair, Alfred Hitchcock, Vittorio de Sica, Erich von Stroheim, Carol Reed, and Humphrey Jennings.

CHAMBERS'S JOURNAL

The heading *Fifty Years of Film* gives the N.F.T. programme planners the freest possible field to work in, and they take full advantage of that freedom. The earliest flickering shadows of the Lumière films, silent masterpieces, the first talkies, classics of all ages and lands, fine films of recent origin considered dead by their distributors, or, like the Carné-Prévert French masterpiece, *Le Jour Se Lève*, banished from screens everywhere by the sinister practice of Hollywood remakes, have all been seen, and continue to excite an increasing number of viewers. Griffith's *Intolerance* and *Broken Blossoms*, *The Battleship Potemkin*, *The Cabinet of Doctor Caligari*, *Earth, October*, *Kameradschaft*, *Blackmail*, and dozens of other landmarks in cinema history may still be seen at the N.F.T. and always, for the seekers after knowledge, there is the almost unknown practice in British cinemas of providing printed programmes. To see, as in recent

months, long queues of enthusiastic would-be patrons, many of them far younger than the films they want to sit through, waiting to view films like Clair's *Sous les Toits de Paris*, Vigo's *L'Atalante*, Bunuel's astounding *L'Age d'Or*, Stroheim's *Greed*, Renoir's *La Grande Illusion*, and Milestone's *All Quiet on the Western Front* is something to gladden the heart of anyone who cares for the future of the film as a serious form of expression.

Of course, the National Film Theatre is still in its infancy, but it is a lusty and highly promising infancy, and one that beckons an increasing number of people away from their TV sets. To many people, from many countries, there is here an amazing sense of new territory being opened up, and even for this alone the N.F.T. promises much not only for the cultural life of Britain, but also for the whole eventual future of the art of the cinema.

Black Girl in Train

*Black girl in the train, incongruously knitting
With brassy needles that shone like gold,
What ancestry bred your calm dignity, as, sitting
Erect, you saw poster-bright stations unfold?
Gold rods in your swift, slim hands,
Gold in your spherical ear-rings and necklace
Gleamed like small trapped suns and bands
Of light against your impenetrable self.*

*Whom did you love? What brought you
Here to delve
In science, art, or such
Reputed greatness of the West
That speaks so much?*

*Your features carved from night
Unrevealed the inward thought,
But while your satin-smooth black fingers
Darted in and out the wool of bright
Parrot-green,
Arrows of awareness shot their glitter
In your patient eyes of luminous jet,
And as in jolting train I met
Their long, long sight,
I looked back and was ashamed
For all that had once flamed
Into frontiers between
The proud and ancient dark,
And proud and ancient white.*

ODETTE TCHERNINE.



Anatomy of 'Coresca'

JAMES HANLEY

THE sailor would say that ships, like people, have faces, and not only faces, but looks. And certainly he would agree with Mr Turner, owner of the *Coresca*, that that doughty boat has a proud look. But then, Mr Turner is a person who likes to see what he owns, which proves the advantage of being the owner of three, and not three hundred, ships. The sailor might even go further, and say that many owners never set eyes upon what they own. Like busy housewives of large and very active families, or, like the Old Woman and her brood in the shoe, they might sense the burden rather than the joys of ownership.

'Yes,' says the sailor, 'ships have proud as well as pert looks, happy as well as miserable looks.'

In the builder's yard the ship is simply a cipher, for not until she breaks water does she attain the status of real citizenship, a citizen of the sea. And having reached this stage she is owned, her life is owned, but her character and spirit, her habits as well as her virtues and vices, remain her own.

'A wise owner is no owner at all,' continues our sailor. 'He is simply a guardian, a loving or an indifferent father.'

Mr Turner, who the first day he owned the

Coresca sensed the something proud in the look of her, would appeal to him. With only three children to look after, he can find the time to give attention to each. There is no favouritism, nor is he burdened by so small a family. Again, unlike the Colossus, he knows where each of his children is at any given time of day or month or year. He follows each upon her ventures. But what man with a hundred ships can say that he knows them as well as Mr Turner knows his little fleet of three?

THE *Coresca* of nine thousand tons is one of these. As the first he bought, Mr Turner is very proud of her. When she or her sisters return home from a voyage, he always sets aside a special day to go down and see them. He goes aboard, walks the decks, stands on the fo'c'sle-head, meditates on the poop, returns to deck-level again. Then he goes into the little saloon. Talks seriously with the captain.

Sometimes the *Coresca* has a dirty face, but not very often, for the servants who do duty by her, from the lowest who clean her from stem to stern, or head to heel, to the highest who from the bridge does his best to educate

CHAMBERS'S JOURNAL

her as to the ways of the sea, always contrive that the *Coresca's* proud look shall also be a clean one.

Captain Dodds, who has her education in hand, and often counsels with her upon the ways of water and wind and the caprices of the sea, can generally tell if Mr Turner feels pleased, for this father of three tramp-ships has an unmistakable habit of patting some part of their anatomy after his inspection is over. It may be the mast, or even the funnel, or perhaps he might give a little tug at the signal halliards, or the binnacle, whose shining brass face always proves to him that sea brass shines better than shore.

Nine thousand tons and straight from Barrow. Something to feel jubilant about, certainly. Captain Dodds, home on Tuesday from the East, is preparing to sail west or south, or even east again, on the following Tuesday. And at some hour before that day of sailing Mr Turner will arrive, and in a very modern engine, for though pony-traps are useful, and even picturesque, they no longer fit into the spirit of things. Therefore Mr Turner drives down to the *Coresca* in an Austin. He is driven by a chauffeur whose first job in life was holystoning the decks of a sloop on a winter's day outside Newfoundland. He even navigated the sloop later. Now he navigates upon the land, finding it much more difficult than navigating upon any ocean, and sometimes foolhardy.

Men are busy cleaning the *Coresca's* decks, polishing her brasses, piling her ropes, rigging her derricks, shipping her hatches. Two even sit high aside the funnel, painting. Her name shines in brightest brass upon bow and stern:
S.S. CORESCA, HULL.

The same spring-cleaning is going on down below. The engineers—there are four—are seeing that the heart of the *Coresca* is well attended to. Like ever-watchful and patient doctors, they know that the shining engines are indeed the heart of the matter. Even the grimy stokehold is being given a shipshape appearance.

Upon shore, housewives spring-clean in the spring; aboard the *Coresca* it does not run by the clock, but is controlled by the living geography of the ship's own life—at the beginning of a long voyage, or at the end of a short one. The s.s. *Coresca* is having a thorough clean. No one is certain at what hour Mr Turner will arrive. Experience and a certain caution has so far put them a day

ahead of the reckoning of the ship's father. The job is done when he arrives. Moored by strong ropes to the iron bits that seem to push up from the stone like fists, she awaits her owner's pleasure.

MR TURNER is old, but wise. Owner of the *Light of Helicon* as well as of the *Torchbearer*, he has one son in command of the former vessel. Mr Turner's last days will not be empty ones. His ships will not, God willing, feel the touch of alien hands. He has seen to that, and his solicitor has sealed the matter.

It is two hours' drive from his home in the country to the quayside where the *Coresca* is berthed. Leaving home punctually at eight in the morning, he generally manages to arrive there just after ten. Nobody notices his arrival. He seems to slip silently in. The car is driven into a dim corner of the shed.

The youth in the office is quite unaware of anything in the shape of a live shipowner until Mr Turner stands upon the very threshold. 'Morning, sir,' says the youth, suddenly busy with a dozen hands, rushing here and there, as though every kind of urgent business had come shooting into the black iron letterbox on the door.

To which Mr Turner replies: 'Goodmorning.'

The youth bends over many bills of lading, appears very preoccupied, whilst Mr Turner, turning back upon him, thrusts hands into trouser pockets and calmly surveys the shed, the cargoes, the gangways, the trucks and barrows and lorries and carts, hears the noises and the cries, smells the sea and the cargo, the steam and the oil and grease.

He is dressed not in severe blues or black, but in almost clerical grey, wears a wing-collar and black tie, black shoes and socks, a hard hat set a little jauntily upon a head covered with clean white hair. Mr Turner's face is as round as a ball, fat, a purplish-red. He has clear blue eyes, set over the most pugnacious-looking nose and chin that has yet been seen upon that line of docks. And everybody knows Mr Turner. He is a well-liked, well-respected man. A bit old-fashioned they say, yet if he were not it would not be the *real* Mr Turner.

And not to see him standing upon the office step, feet well apart, hands deep in pockets, with everything amidships flaunting itself to

ANATOMY OF 'CORESCA'

the world, like the gold-watch chain, and the prominent bulge in the area of the vest, would be to presume that the pride of the owner of the *Coresca* was beginning to grey.

Suddenly the youth at the desk looks up, but Mr Turner has gone. Breathing a sigh of relief, this minion in the world of ships goes to the little office fire and furtively lights the stub of a cigarette, while one eye is glued upon the door. He puffs away not only contentedly, but with the air of a person suddenly possessed of an almost anarchical spirit and attitude towards the world of order and decorum. He leaves piles of bills of lading, railway waybills, ships' timekeeping books, unopened circulars upon the sprawling mahogany table.

Mr Turner himself is puffing away like a steam-engine towards the *Coresca's* gangway, and as he steps upon it the puffs become audible enough for a passing sailor to hear, and if he doesn't know what that sound means, then, as Captain Dodds often says, 'he'll eat his blinkin' hat.' So the signal travels like lightning, to rooms, cabins, fo'c'sle and bridge and engine-room. The owner has arrived.

CAPTAIN DODDS puts down the *Journal of Commerce* and leaves his cabin. He goes into the chartroom, where the mate, aboard by accident, is studying some maps. 'Oh, Mr Fearon, you might tell the bosun Mr Turner has arrived,' and as he goes out through the door, adds quickly: 'See to things,' which, of course, means: Will Mr Fearon make a quick circuit of the *Coresca* and see that everything's O.K., whilst Mr Turner and he retire to his cabin to talk over usual and unusual things?

Mr Dodds has vanished. 'Um!' says the mate. 'Old Turner aboard—um—aye—' and putting on his new cap he goes out, too.

'Ah! Morning, sir. Cold to-day?' Captain Dodds greets Mr Turner.

'Er—yes. Oh, good-morning, Captain Dodds. Phew!' Mr Turner has, without a hitch, puffed his way to the very top of the *Coresca's* gangway.

Captain Dodds puts a hand on his arm, ready for that perilous descent of one foot four inches to the red-painted iron deck.

'I—er—thanks, Mr Dodds—I—er—phew!' and then, like a shot from a gun: 'No fenders out for'ard at all, Captain, no—'

'Just going out, sir. Shall we retire to my cabin?'

Mr Turner, having recovered his breath, has already begun to move off in that direction, a very considerate Captain at his side. 'All your stuff aboard yet—aye—phew!' and Mr Turner emits another gasp. Then he pauses suddenly to take a quick look round the *Coresca's* decks. 'Aye—well, East again, I hear, eh? Aye!'

'Yes, sir.'

They have reached the companion-ladder, just as a shower of coal-dust blows for'ard of where the two men stand. 'Damn them!' exclaims Captain Dodds, low in his throat. 'Damn that ship. Would coal this morning, of course.'

Mr Turner precedes him up the ladder. He follows behind, on guard for accidents. So they reach the bridge-deck and the security of the Captain's cabin.

The engineers have come up from below and gone to their rooms to change. The bosun, too, has left the deck, intent on getting a less greasy-looking cap and a cleaner reefer-jacket. The sailors who happen to be on duty—there are three of them—have also gone off to wash and change. Two have come down from the funnel, one from the hold, where he has been helping the carpenter. The remainder of the *Coresca's* crew will not be aboard until to-morrow morning, at the hour she is due to sail. This skeleton crew represents, with the owner and the Captain, the only living souls aboard. Yesterday the ship had a dirty, undressed, untidy look. To-day she is spick-and-span. Decks are cleared, all debris piled in heaps in the shed below—dunnage and matting and ropes, lengths of wood, hammers and brooms and brushes, pots of paint, cotton waste. Mr Turner is on board. That means business.

As the sailors come down the alleyway they can see both the Captain and owner standing with their backs to them upon the monkey-bridge. Mr Turner's hard hat, they are quick to notice, is now tilted further back upon his head. Captain Dodds clasps his hands behind his back. The two men are in conversation, for every now and then the taller Captain bends forward to listen to something that the owner is saying. They are looking out over the river.

'Inspection has begun,' the three sailors

CHAMBERS'S JOURNAL

seem to say as they stand on the scupper's edge. Now they are washed and changed and looking pleased with themselves, for as soon as Mr Turner has gone, which will be within the hour, they are free to go ashore and not return till the morning.

The owner and the Captain descend, Mr Dodds leading this time, again on guard, ready for any emergency. He wonders why, at seventy-nine, Mr Turner does not prefer the warmth and comfort of his fireside in the country. Fifteen years with the Triangle Line has not taught Captain Dodds very much about the owner. They reach the bridge-deck. This is the moment for Captain Dodds to move away a few paces nearer the boats, where he stands examining with minute attention the fingernails of both hands. Mr Turner is very busy surveying his ship.

The black funnel with its brightly-coloured band of new pink paint round its neck, the tall masts painted black, the bright-red decks newly washed down, the milk-white deck under his feet, the yellowish-looking ventilators, the grey derricks, the newly-painted capstan on the fo'c'sle-head, the brand-new white rails for'ard. Mr Turner sees it all. The hatches battened down, the ropes and blocks and tackle of the shore-gang neatly piled against the bulkhead, the polished hydrants. He coughs, and Captain Dodds looks up. It is time to move on. A moment later they are on the main-deck.

From here Captain and owner will go aft, turn about, come back down the starboard side of the *Coresca*, inspect the fo'c'sles, climb to the fo'c'sle-head, inspect the new shield for the fo'c'sle-head lookout. Then to the saloon amidships and down the stairs to see the storerooms, the galley, the pantry, the fridge, the stewards' rooms.

MR TURNER and his Captain seem to be excited about something. This something has travelled by devious ways to the owner's ear, it being nothing more or less than the chief engineer's opinion that an inspection of the engine-room and stokehold, for which Mr Turner's curiosity is well known, is hardly necessary. The chief engineer feels more and more that a descent into the bowels of the *Coresca* at the age of seventy-nine is something both venturesome and dangerous.

But it is the ever-obliging and patient Captain Dodds who takes the full brunt of the

174

owner's quite expected reactions. 'Such nonsense, indeed,' exclaims Mr Turner. 'Such—' and the Captain sees that red face grow redder, that pugnacious chin almost tremble, the blue eyes flash, the chain spanning the grey expanse of vest begin to shake, the hands move restlessly in the pockets of his overcoat. 'Such nonsense. I am glad to hear about this. I am indeed,' thunders Mr Turner. 'Tell me, Captain Dodds, what is your opinion? I always—well, well—I—er—oh dear! What is this?' He has heard his name called and looks up. Captain Dodds looks too.

A messenger from the shed is standing at a distance of ten yards. 'Excuse me, sir. You're wanted on the phone, sir,' says the man.

'Who wants me?' Mr Turner barks back at him.

'Er—a Mr Jennins, sir.'

'Well, tell Mr Jennins I'm busy, man,' replies Mr Turner, and he swings round to face Captain Dodds. 'Now, Captain, I want to see that forepeak—I—er—as a matter of fact, I want to see the new boat, too. I suppose it *is* here?' and here the *Coresca's* owner stamps off, not aft, but for'ard, as though determined to see the forepeak right away, and the new boat, and the new rails.

The messenger has departed. Mr Turner is the first to notice it. 'Good,' he seems to say as he stamps along, head forward on his breast, a considerate Captain close at his heels.

After all, thinks Mr Turner, this is *my* day. Why on *his* days should he have people come running after him? Always he visited his ships, always he inspected them, kept contact with their crews, cracked a joke with the bosun, questioned a new man or boy, took a personal interest in the Captain's family. He would continue to do so until the end. Let Mr Jennins wait. It wasn't a matter of business. Not at all. Some fool wanting him to try out a new invention. Sometimes inventions can wait until to-morrow.

HERE we are,' Mr Turner says, and then stands to stare at the three sailors who are now moving off to the fo'c'sle. He looks at them with a most critical eye. He knows them all. Then he himself follows them up the alleyway, Captain Dodds bringing up the

ANATOMY OF 'CORESCA'

rear. 'I've been thinking lately that the men might be housed amidships, Captain Dodds. I—er—well, a number of ships are now being built with their crews' accommodation built amidships. Some constructional alterations, I—er—what is your own opinion, Captain?'

But Captain Dodds now finds it rather difficult to venture one, for the best part of Mr Turner seems to have disappeared through the chain-locker door. He therefore holds his tongue upon this matter until the *Coresca's* owner—different to any owner he has ever known—emerges from the locker and gets to the safer place in the fo'c'sle.

MR TURNER'S inspection is like the inspection of a body. Not content with wanting to see the *Coresca's* heart, he wants also to see her head, her eyes, shoulders, lungs, and legs. The anatomy of the *Coresca* is something almost sacred to her owner. Perhaps Mr Fearon, and not Captain Dodds, would be his ideal companion on such an inspection. Like a surgeon, Mr Turner likes to see all with his own eyes before he will give the sign and signature that the ship is ready for duty.

She has sunk much lower in the water since yesterday. The makings of railways for desert lands and sprawling prairies lie buried deep in her holds, the stuffs to clothe natives and savages lie there, too, and many brightly-coloured things to please the child in them all. Iron and steel and cloths to go half over the world. She will sail on the first tide to-morrow, at an hour when Mr Turner will be in his bed, and his importance cast aside for the length of another voyage.

MR TURNER has emerged from the locker, stands upright, looks at the Captain, says sharply: 'Now the new boat. I was wondering yesterday if I oughtn't to—I—well—as a matter of fact—oh, easy there, man,' and the owner pulls up sharply on the step of the fo'c'sle as a rushing man tries to get past him, quite unaware that it is none other than the precious owner of the ship. His face reddens, he appears awkward, stands aside, pressing his body against the bulkhead, whilst Mr Turner gets past, Captain Dodds at his heels.

Mr Turner walks quickly down the alleyway, apparently deaf to the bosun's 'Sorry,

sir, I was rushing along to—' and the remainder of his apology floats away into thin air. But no sooner have the two men emerged upon the open deck than the owner of the *Coresca* stamps back towards the alleyway. Bosun and owner now meet face to face. 'Well, bosun, and how are things with you?'

Not a word about that unfortunate bump of a moment ago—simply: 'How are things?'

'Very well, sir, very well. I—as well as can be, sir.'

'Good! Good-morning,' and Mr Turner dashes off to catch up with the Captain.

Their very gait—they amble aimlessly rather than stride with definite purpose in view—their very attitudes seem those of men who have suddenly flung the garments of fuss and urgency from their shoulders. The sailors come out on to the deck and follow the two men with their eyes until they finally vanish up the ladder. The bosun, too, has made himself scarce. Some hole or corner of the *Coresca* holds him in isolation. Another hour or two and he, like the others, will go ashore and homewards, to spend the last few hours with his family before sailing.

MR TURNER throws back his head, looks at the greying sky, the curious half-light that is settling itself over quays and sheds and ships and distant waters. Then he meets the funnel with its bright pink collar foursquare. He even smiles. Mr Turner is satisfied, and, if Captain Dodds knows anything, he is happy, too. Mr Turner smiles up at the funnel, the stays, the mainmast, the bridge, the ladders, the signal halliards now swinging gently in the light breeze, salt-laden as it comes over the bow of the *Coresca*. 'Beautiful ship,' his smile says. 'Splendid ship.' Does she stir ever so gently under his feet, does she raise her head ever so little, that long body-swing lightly away from the quay? 'The ropes hold you,' his smile says. 'The stout ropes hold. But to-morrow you will be free.'

No doubt of that. For the loaded *Coresca*, the spick-and-span *Coresca*, is indeed showing the first stirrings of her spirit, feeling something urgent and compelling in the air, something that to-morrow morning will burst, when the Blue Peter flies to her mast-head. Like a proud horse she will raise her head against the strain of the holding ropes as they slacken, and then are gone. Turning

CHAMBERS'S JOURNAL

her head seawards, from the shed, veering away from iron and stone, bricks and mortar.

Captain Dodds and Mr Turner are now in the former's cabin. Both have risen to their feet, one looking out through the porthole, the other eyeing the recently-emptied brandy-glasses. Then Mr Turner steps outside. Captain Dodds follows. 'Well,' says Mr Turner, 'I hope you have a very successful trip, Captain. I—er—any new men this trip?'

'One, I believe,' replies the Captain.

Mr Turner is strangely silent, seemingly contemplative as he walks slowly ahead of his Captain. One hand under his chin, he stands by the ladder.

'Looks like rain, sir,' remarks Captain Dodds.

'Yes.'

They descend the ladder one after the other, Captain Dodds first, a now slow-moving owner behind him. Here Mr Turner pauses again, this time to glance up at the sky, fast seeming to give warning of a downpour. The two men have reached the gangway head.

'Don't bother to come down, Dodds,' says Mr Turner, the first occasion on which he has addressed the Captain of the *Coresca* by his surname. 'Don't bother, I—'

Captain Dodds wonders, is silent. What on earth can the old man be thinking of? Nothing, in fact, except the coming rain.

Mr Turner makes the first move shorewards.

But Captain Dodds simply will not stand there. He goes halfway down the gangway with the owner, and then pauses.

Mr Turner has turned round, seems to be staring at the Captain, through the Captain, staring up, through and over Captain Dodds's head, eyes here, there, and everywhere, as though he were suddenly intent upon drenching himself with a look of the *Coresca*—huge black bow, flashing name, tall masts. 'Well, good-bye, Captain. Best of luck this time, I—' and slowly he puts faltering foot upon each gangway step as he descends. 'I—er—'

He is certainly muttering something—what, the now uncomfortable Captain is quite unable to follow. Captain Dodds remains stock-still in the middle of the gangway, scratches his chin. There are footsteps behind him. Bosun and sailors now going ashore. 'Afternoon, sir.'

'Afternoon.' He hardly sees them, as he stands back to let them pass.

The *Coresca*'s owner has not yet reached the bottom of the gangway, and Captain Dodds will wait until he has reached the greater security of the quay. Suddenly he is there, and more, he has turned round and is smiling up at him—up at him and beyond him.

Captain Dodds waves a hand that Mr Turner either does not see or does not want to see. Then he disappears into the shed.

The Little Things

*A gold-ringed sleeve, a cigarette,
A tide of grey and blue—
These are the things I can't forget
When I look back at you.
Pale dawns and clear, cold winter stars,
The sea's sad song, ships' bells,
The noisy gloom of station bars
And grey dockside hotels.*

*Now I live inland out of sight
Of flashing gulls and spray,
Far from philanderers like you
And ships that sail away—
And yet I walk this dull safe street
And hope with bitter pain
That somehow, somewhere we might meet
And start it all again!*

JOAN POMPRET.

Protecting the Fisheries

JOHN MAURICE

IT is possible for a British fishery cruiser to arrest a Danish fishing-vessel and take her into a Dutch port for trial before a Dutch court. International co-operation of this kind has nothing to do with the United Nations: it has been in operation for nearly seventy years and is the result of the North Sea Fishery Conventions.

The idea of fishery protection appears to have originated in Scotland. In the Middle Ages the fisheries were particularly important owing to the large number of fast days required by the Church. Many of the great monastic establishments had their own fishermen and curing-houses at the ports.

When the May Island herring fishery was established in the 12th century, William the Lion granted the fishery to the May Island monks, to whom the fishermen paid tithes. Some four hundred years later, when the Flemings attempted to dispute this claim, James V despatched a warship and sent 'a barrelful of their heads into Holland with their names fixed to their foreheads on cards'—the first recorded example of effective enforcement of national fishing rights.

In general the Scottish fisheries were in enclosed waters and foreigners were excluded. The English fisheries, on the other hand, were principally in the open sea and free to all. This did not prevent disputes. In 1274 the Flemings were alleged to have killed 1200 English fishermen in a sea-fight and a little later an attempt to capture and burn Yarmouth was only frustrated by the vigilance of the Warden of the Yarmouth Coast.

With the Reformation, the religious reason for fasts disappeared and the fisheries declined. In England attempts were made by the Tudors to introduce legal days of fasting to assist the fishermen. At one period it was illegal to eat meat on Wednesdays, Fridays, Saturdays, or in Lent. Not unnaturally the

laws were unpopular and widely evaded. By the time that James VI ascended the English throne the fisheries had sunk to a low ebb. He introduced the Scottish conception of national fishing rights. This caused endless legal argument amongst international jurists from Grotius onwards. It was not until the North Sea Fishery Convention of 1882 that general agreement began to be reached.

THE North Sea Fishery Convention was signed by Great Britain, France, Belgium, the Netherlands, Denmark, and Germany. It defined territorial waters, within which nations had exclusive fishing rights, and also laid down certain international offences, for which a fishery cruiser could arrest a vessel anywhere on the high seas and carry her into the nearest port for prosecution.

The principal offences are stealing buoys and cutting the nets of drifters, either by trawlers steaming wantonly through them or by more deliberate malefactors severing the nets with an instrument shaped like a sharpened hook, known as the Belgian devil, with the idea of driving rivals off the profitable fishing-grounds. Rather curiously, coupled with these violent crimes is the more venal offence of using a ship as a floating grog-shop.

To enforce the Convention and protect her territorial waters England maintains a force of some half-a-dozen fishery cruisers with their headquarters at Hull. These are mostly ex-minesweepers, whose shallow draft makes them very suitable for the job. They patrol the fishing-grounds round the coast and also the more distant fisheries, such as Iceland and the Barents Sea. They co-operate with the Scottish Fishery Board, who maintain their own patrols.

Nowadays gross breaches of the Convention

CHAMBERS'S JOURNAL

are rare, and the chief duties of the fishery cruisers are settling disputes and assisting fishing-vessels in difficulties. These may be anything from normal maritime disasters to seizure by Barbary pirates, an untoward event which occurred off the coast of Morocco as recently as 1908.

Some of the richest fishing-grounds in the world are in the Barents Sea, and there the Russians are apt to cause difficulties. Trouble first occurred nearly thirty years ago and a fishery cruiser was sent up for the protection of our fishermen. One day she received a wireless message from a trawler that she was being pursued by an armed Russian vessel. The fishery cruiser proceeded at full speed to the scene of action and, on arrival, closed the Russian, to discover the cause of the trouble.

As the British ship approached, it could be seen that a mass-meeting was taking place round the Russian's galley. The reason for this choice of place became clear when it was noticed that the meeting was being presided over by the cook, who emphasised his points with an immense fish-slice. Bursts of fiery oratory could be heard coming over the water and a hard-fought action at point-blank range seemed the only possible outcome. However, eventually the meeting broke up; the crew went peacefully to their stations; the ship, ignoring all signals and hails, steamed quietly away and was seen no more.

CLOSELY bound up with the question of fishery rights is the problem of territorial waters. These are generally accepted as extending three miles from the shore, the distance having been based on the maximum range of shore batteries in the 17th century, at which time the theory was first propounded.

Normally this definition does not present any great difficulty of interpretation, but in places like the coast of Norway, where there are innumerable off-lying islands and rocks, some of which are only inhabited spasmodically, the possibilities of disagreement are endless. In the case of Norway, the dispute was carried to the International Court at The Hague, which decided in favour of the Norwegian contribution.

The protection of territorial waters against foreign poachers forms a considerable part of the duties of the fishery cruisers. Fish tend to

breed in the shallow waters near the coast and, in most territorial waters, all trawling is forbidden. This offers an almost irresistible lure to the foreign poacher and also to his British counterpart.

Such an area is Rye Bay near Dover, the scene of numerous battles of wits between the fishery cruisers and French poachers. Frenchmen are particularly unwelcome poachers, as the French law permits the use of nets with much smaller mesh than the British, with the result that there is destruction of young fish.

At one period the French poachers had their own protection service in the form of a trawler fitted with a powerful wireless-transmitter, which kept well outside the three-mile limit herself and broadcast a warning as soon as a fishery cruiser appeared. The fishery cruisers were compelled to arrive at night completely darkened or to sail ostentatiously to the westward in daylight and double back after dark.

When hunting for poachers, the ear is more important than the eye. The trawlers, except when actually hauling in the trawl, use no lights and usually choose foggy nights for their raids, but they cannot suppress the beat of their petrol or diesel engines entirely. The fishery cruisers, being steam-driven, make little noise.

The hunt itself has all the ingredients of drama—the carefully-thought-out plan to arrive undetected; the darkened and silent ship; the multiplicity of small sounds—waves, birds, cars ashore; the first faint thud of an engine; the stealthy approach by ear; the dark shape visible through night-glasses; the beam of the searchlight cleaving the darkness and revealing, with luck, a crew of startled poachers.

Usually the Frenchmen, hampered by their trawls, make no attempt to escape, though occasionally one will try steering over a shoal in the hope of trapping her captor. The fishery cruiser places an armed guard on board the poacher and escorts her into harbour for trial. As a rule, the court orders the confiscation of the catch and fishing-gear and inflicts a fine of anything up to fifty pounds. Nevertheless, the relations between captor and captured are almost invariably excellent. They part company, the fishery cruiser satisfied with her night's work, the poacher balancing the profits of a successful raid against the risks of being arrested again.

Twice-Told Tales

LI.—England and the English by a Chinese

[From *Chambers's Journal* of March 1855]

OF dusky and cloudy weather there is in Great Britain quite an excess, and rain in abundance. Among my countrymen there is a saying that 'in the West the skies leak.' This is not far from the truth.

In their cities the public streets cross and recross, and upon them you constantly hear the rumbling of coaches or carriages and the tramp of horses. Sometimes the crowds of people in the streets are so large that the passengers touch each other's shoulders. On the roadside there stand lamp-posts, with beautiful lanterns, that, when lit at night, illumine the whole expanse of the heavens. It is as clear and bright at midnight as at noon-tide, and, if I mistake not, as gay as our Feast of Lanterns.

Cars of fire, urged on by steam, fly as swiftly as the wind on the rails of the railways.

The houses are as close together as the scales upon the back of a fish. Doors and windows are all furnished with panes of glass, and bright light is reflected from every part of the room, so that one, as he sits there, may fancy himself a resident of the moon. The bedrooms are so close and air-tight that no dust gets in, and the wind is only heard blowing upon the outer shutters.

The faces of the fair sex—for shading which they wear gauze veils of the finest texture—are as delicate as the hibiscus flower; and as I have watched them sitting side by side in the same carriage, I could not help remarking how like the sweet violet they looked. Their eyes, having the blue tint of the waters of autumn, are charming beyond description. What perhaps caught my fancy most was the sight of elegantly-dressed young ladies, with pearl-white necks and tight-laced waists. Nothing can possibly be so enchanting as to see ladies that compress themselves into taper forms of the most exquisite shape, the like of which I

have never seen before. The elegant dresses they wear are often made of watered-silk, that looks like a collection of fibres from some cirrus cloud. When they go out for a walk, fine silken bags dangle from their pretty arms, coral chains with gold watches are slung around the neck, they carry open parasols of the shape of the full moon, their robes are as gay as the rainbow; and as they pass and repass you while you stand at your door, the pretty sounds of their tittering and talking remind you of the sweet notes of the thrush.

As to the men, they have prominent noses, bushy eyebrows, and frizzly hair. They spare no pains in washing, dressing, and adorning their persons. Their under-garments are tight; their outer, short and open in front. The sleeves of their coats are worn tight, to keep out the cold. Scented oils or waters are much used, some of which for deliciousness of flavour can vie with what is of the highest repute among us under the name of 'The Dragon's Saliva'. They carry beautiful pieces of gold and silver money in elegant purses.

When strangers meet, the intercourse is most respectful, and the conversation free from rude speeches. Sometimes, as a mark of attention, they may treat you to a glass of wine, sometimes to a cup of tea. Their young children are well-educated and well-behaved, and the sweetest harmony prevails in the family-circle; so that, whenever its members group around the fireside, there is no squabbling, no wrangling, but all is order, quiet, peace.

When they take their meals, the whole family sit at one and the same table. Their table-knives glitter like the hoar-frost, and have edges sharp enough to mince the toughest meat.

The usual hour for getting up in the morning is five o'clock.



Faint Heart

THOMAS KELLY

THADY MALONE had been a widower for almost a year when the smell of frying bacon reminded him that he was barely fifty, and without a wrinkle in his face, or a grey hair on his head. He decided to get married again.

The smell came from the cottage of his nearest neighbour in the remote end of the parish of Ballydreskin. It was an appetising smell, but it merely reminded him of his dislike for cooking in any form, more especially the frying of rashers with the aid of an open turf fire.

A quick mental review of his circle of feminine friends revealed nobody on whom he might set his fancy with a view to matrimony, for the surrounding countryside was a region of large farms and few dwellings. It was a locality where, if marriages were not made by the map, or by accident, so to say, the question of the introduction of suitable couples often presented a problem.

A worse penman than he was a cook, Thady spent some little time with tongue protruding from gripping teeth, his brow puckered. But the letter he wrote laboriously to Sean Lavelle brought that not too familiar friend to his doorstep a couple of mornings later. Sean was a 'dalin' man' who specialised

in sheep and cattle, wore brown leggings and a dirty mackintosh, and was known to have tactfully introduced many a match through the length and breadth of the county.

When his shadow darkened the door, Thady, busy filling his pipe, called out cheerfully: 'Oh, it's yourself, Sean, so fine and early in the morning. Come on in now, and don't be standing out there in the draught.'

'Ah, sure there's no draught at all, Thady,' the visitor shrugged as he shuffled into the kitchen. 'It's a fine, calm day.'

'Now you mention it, Sean, the wind has died down sure enough. And died down gently and slowly, which is a good sign. Maybe the weather is going to take a turn for the better? You'll have a cup of tea?'

The newcomer eyed the other man with amused speculation. 'You didn't invite me over to discuss the weather, did you? And you know I don't drink tea at all.'

'Well now, although the weather is an interesting subject, and always a relevant one for the farmer, I didn't,' Thady Malone admitted with a grin. 'But I thought I put a sort of a little—you know—agenda in my letter. Did you get it all right?'

'Would I be here this morning if I didn't?'

FAINT HEART

The newcomer's gruffness did not hide his impish amusement.

'I should have guessed that you wouldn't, Sean. But I do believe my letter gave you a—bit of a surprise?'

'Still, even if it did, it wasn't an unpleasant surprise.'

Thady Malone nodded approvingly. 'Well, I'm glad to hear that admission, anyway. I was almost afraid you were going to say it gave you something of a shock.'

'Oh dear, no,' Lavelle negatived generously, as his host moved towards the cupboard in the kitchen wall. 'It takes a good deal to shock me, and your letter didn't. All the same, Thady, the general idea is that you're a settled class of a man who'd never think of risking a second matrimonial venture.'

'General rumours are often built on bogus ideas, Sean.' Thady Malone paused with a black bottle held in one hand, two tumblers gripped in the other. 'You're not insinuating that the general idea is that I'm anything like an old man, so far as marriage goes?'

'No insinuation of such a nature, Thady. Far from it. But the notion is that you're the kind of a man that's classed as an idealist, if you get the implication. Only a small one for me, it's a bit early yet.'

'I'm not an idealist, if that means a person with *peculiar* ideas. Say when.'

Sean Lavelle frowned as his host poured from the black bottle, very slowly. 'But I thought, Thady—and I'm not the only one did the likes—that Anastasia and yourself had been so happy together, that the last thing you'd think of'd be to bring another in here to fill her place . . . Ah—ah—when!'

'Well, I hope my next *will* be my last marrying.' The widower allowed himself a smile as he put down the bottle.

'Maybe I'm thinking more of what that wise man said,' ruminated the cattle-dealer. '"A second marrying", said he, "is nothing more than hope playing a trick on experience."

'Mind you, I heard that same saying, Sean. But they told me the man who first made it was a bachelor. So mightn't he have been only trying to be funny?'

'Maybe so. All the same, there's more than fun in what he was driving at. Once you've grown accustomed to the whims and whams of one particular person, you might find it tough going to get acclimatised to the oddities and the peculiarities of another.'

Thady Malone laughed. 'Oho, time is very

soothing in that regard, Sean. I'm not boasting when I claim that I'm a—a pliable class of a man. Anastasia, of course, was one of the best, but already I've grown *un*-accustomed to her little fads and fancies.'

'I heard ye hit it off as smooth as one of them Dunmow flitch couples you read about across in England.'

'And of course we did. Isn't that the crux of the matter? I find it hard to get accustomed to being a singular man again.'

'All the same,' the visitor suggested, absentmindedly caressing the tumbler, 'you've nobody now to divide your joys, and double your troubles. Anyway, here's to the memory of Anastasia.' Sean Lavelle raised his glass, and the two men drank solemnly.

AFTER a moment Thady Malone asked: 'What real comfort has a widow-man? None at all. In a manner of speaking, he has only half a home.'

'I see your point, Thady, as clear as I see the nose on your face. The fact is that you're what they call a marrying man.'

'And my neighbours are largely to thank for that. My nearest ones—the Finnerans—oh, talk about scandalisers! But my second-nearest—the Fogartys—the best in the world. "Herself" is a grand little person. Comes in each day to cook the dinner and tidy up here. So I'm troubled that one of these days the scandalmonger'll say something that—that—something about Ellen Fogarty looking after myself so—friendly, if you see what I'm trying to explain to you.'

'I see it rightly, Thady. And I'll announce that your delicacy in taking such a precaution against such a scandal does great credit to your modesty.'

'I hoped you'd see it in that light, Sean,' Malone said solemnly. 'Besides, isn't the greatest compliment a man can pay his first wife the wish to go in for a second as soon as number one is a—reasonable time—er—um—departed to her reward?'

'So you never heard of the commendable idea of—cherishing the memory of the first?'

'I did so, Sean, and I'll admit it's a worthy sentiment for a young widower like myself, not to mention an ancient one. But if you keep on and on, and do nothing except—*cherish the memory*—who'll cook the meals?'

The cattle-jobber tapped with his ashplant on the flagged floor. 'Still, isn't it grand to

CHAMBERS'S JOURNAL

hear of the surviving partner dedicating himself—or herself as the case may be—to romantic regrets?"

"A very true saying, no doubt. But isn't the man who goes in for a second partner saying, in effect, that the romantic memories of his first were so pleasant that he wanted to make sure they'd have—in case they ever faded—worthy successors?"

"You have your lesson off by heart," Lavelle sniggered. "Now, what I'm wondering is, why you picked on me to advise you?"

"Oh, the answer is simple, Sean. You've the widest circle of neighbours and friends and well-wishers of anybody I know. I'm living sort of isolated here, but you get about to markets and to fairs, and you're a practised man of the world. So I thought you might be able to suggest and—later on, maybe, if I so decided—introduction me to some fittable female who'd think over, and talk over, after a bit of courtin', d'you see, the notion of making the venture with myself."

"Sure I guessed that part," the man of the world admitted. "But don't forget, Thady, you're secondhand goods now. You're a shade longer in the tooth than when you first met Anastasia."

"Ah, don't you be quoting the calendar so precise, Sean. I've given up looking at it. A man is as young as he believes he is."

"So you're aiming to go in for a young wife, I suppose?" Lavelle made no attempt to conceal his amusement.

Thady Malone shook a not too doleful head. "Oh, don't mention a real young one to me. I wouldn't look across the road at one of the modernites, with her plucked eyebrows, her padded shoulders, and her painted toes. What I have in my mind's eye is a good, sensible—"

His visitor helped him out. "Then I'm glad to hear that. A nice, steady girl, not too juvenile, yet far from ancient. Not a harum-scarum, of course, but still not too solemn a voteshen altogether. A round face, as you might say, instead of a long one."

"I couldn't put it tidier myself," the would-be bridegroom smiled. "But, of course, in addition, she must come from a good class of a family, and not come empty-handed."

The ambassador's snort was almost angry: "What?" he rapped. "Is it the nerve to be expecting a dowry you have, and you a settled widow-man, with two-and-a-half score years behind you?"

"But a comfortable widow-man, Sean. Nobody can deny the snugness of my place here. I've even been called well-off. Ho, ho, if I went into a certain bank in the town, the manager'd notice me. And if you're a poor farmer, the manager doesn't ask how things are going with you. He's content to guess."

"Well now, Thady, I'll own you surprise me," the admission came irritably. "Did you never hear it said that the man who marries money earns it? The feeling that she's brought you the stuff'd make even a loving wife long to spend her own—and yours with it. Sure, an extravagant woman'd run through a mint of money in no time at all. Take my advice now, and put dowries out of your mind."

Thady grunted, then scratched his ear thoughtfully before admitting: "Maybe it doesn't pay to be *too* grasping, provided you'll find me a charmer. Poor Anastasia was sedate, as well as thrifty. She left me better off than she found me."

"And she didn't bring much into you," Sean Lavelle put in slyly.

"Well now, at this day and hour of grace, there'd be reckoning-up on that. Between the money she had in her own name from a maiden aunt, the big cheque from her uncle, a drove of cattle from—"

Again the visitor interrupted, this time a trifle testily: "Ah, sure you're only proving my point, man. Getting money with a wife leaves you muddled as well as mean. Now, supposing we put the—filthy lucre aspect of the matter on the long finger?"

"But have you anybody particular in your mind's eye?" Noticing the other's empty glass, Malone again uncorked the bottle, slowly.

"Sure, that's the problem, Thady. I've so many that I'm muddled from the numerosity of them."

"Well, well, well! It's grand to be spoilt for choice. Maybe we could have a kind of a general squint over them first?"

"*N*Ow, who will I start with?" the visitor asked the ceiling. "But, wait a minute. It occurs to me that we'd save time if I knew whether any particular person was ruled out."

"Offhand, I can give you one class of female, Sean. She mustn't be a widow."

"Well, if that isn't the best yet!" Lavelle

FAINT HEART

swished his drover's stick against his leggings. 'What possible objection—what taboo, as the man said—could a widow-man have against a widow-woman?'

'She might have an unfair advantage,' explained Thady. 'I hope I'm looking *too* far ahead, but if ever there came a rift in the lute, wouldn't I be well-placed if I could lament: "Dear, oh dear, if only my first gentle and lovely choice had been spared to me!"'

'Still,' the dealing man considered the point, 'mighthn't a former spinster, as well as a former widow, contradict you there?'

Thady Malone's smile was patient: 'I wasn't thinking of contradictions so much,' he explained tolerantly, 'as of getting the last word in first, so to speak. Don't you see the risk there'd be that a former widow might forestall me—by quoting the paragon of all the virtues that was her first husband?'

'Very good so,' snapped Lavelle. 'No widows need apply. Now, to be serious at last, there's a fine hardy girl I know, and I think she'd be, as that man in the story said, willin'. Back in Tullybraskey she lives, but maybe I might admit at the start that she has a kind of a—*a little—er*—hesitation in her walk.'

'Sound in wind and limb, Sean, if you don't mind. I wouldn't like my second to disimprove on my first. Call that one cancelled.'

'Second, there's a fine slashing girl back in Lissacree, can take a man's part with a rushed harvest. And as skilful as a domestic economy instructress with butter and with fowl.'

'A girl who's good with chickens is usually no chicken herself,' the widower put in with a solemn nod. 'How old is she?'

'Ah, give me a minute now.' The dealing man again studied the whitewashed ceiling. 'Twenty-nine.'

'A dangerous age for a woman.'

'Dangerous? How do you make that out, Thady?'

'This way, Sean. You never know whether she's forty-one, or only thirty-five. Once a woman turns the thirty, she does nothing but look back. Who's next in your mind?'

'One of a classy family across in Ardncrawley, and I fancy she wouldn't be averse—she's the eldest—to changing her name for a nicer one. But maybe I should disclose that her complexion is a bit sallow, and her hair as black as the raven.'

'I don't like them dark ones at all.' Thady stopped in the act of lighting his pipe. 'My favourite colour is auburn.'

'I get you. As the jocorous man said: "Sweet auburn, loveliest pillage of the vain." Wasn't that a good conundrum?'

The expectant husband frowned. 'I'll take your word for it, Sean.'

THERE was a pause, then Thady continued: 'But have you nobody in mind that you could recommend willing, and without first mentioning her disabilities?'

'Indeed I have, Thady, my boy. A grand branch of a girl, from the second-next parish to your own. As the song says: "A colleen fair as May." What's this I heard her called? Yes, yes, a—a platinum blonde.'

'And how old would she be, at this identical moment?'

'Just on the turn of twenty-eight, Thady. Precisely the right age in the circumstances. Not too young to settle down in a snug place that needs a sensible mistress, yet not old enough to start wondering if she'd ever settle down. More than her fair share of good looks, and able to manage a house as well as the best of them.'

'Would that include managing a husband, by any chance, Sean?'

Lavelle smiled sheepishly. 'Oh, she's not that sort at all. As gentle as the cooing dove. As hearty a laugh out of her as you'd hear from a stage comedian. And the lightest hand with soda-bread—not to mention cakes or pastry—of anybody in the three parishes.'

'Glory be!' Thady Malone rubbed his hands with glee. 'But isn't it a wonder you didn't put such a prize, such a human angel, at the head of your list? The second-next parish you said? Sure, I know something about every family there. What name'd be on her at all?'

'One thing I'll tell you about her name, Thady. I never yet heard it criticised. She bears the same surname as myself.'

Thady Malone's laugh was long and hearty. Controlling himself he asked: 'Am I suffering from delusions, or am I beginning to see daylight? Would I be greatly off the mark if I insinuated that she might be some sort of a kind of a *relation* of your own?'

'Well, now that you mention it, Thady, she is indeed.'

'Oh, but—ah—very far out, I suppose?'

CHAMBERS'S JOURNAL

'Oh, not so terrible far,' Lavelle countered airily. 'Some people'd even call it close. She's a first cousin.'

'Now, don't tell me,' exhorted Thady Malone, his eyes twinkling, 'that you're referring to your cousin Jane?'

'If I may ask a civil question, why not?'

The other man did not appear to be listening. 'Plain Jane,' he said, as he chuckled to himself. 'Twenty-eight was *your* guess, Sean? Well, talking of second-sight, if Jane sees thirty-eight again, she'll be having her second glimpse of it. Ha, ha, ha.'

'That's an outrageous calumnyation you've made, Thady,' the cattle-dealer snorted. 'And I'm nearly sure it's libellous.'

Malone jerked up from his chair and said: 'I hope you didn't mention my name to your first cousin?'

'But how could I even hint her name to you if I hadn't indicated your identity to her first?'

'Our specialiser on feminine etiquette,' Malone sneered. 'May I hope you didn't insinuate that I might be paying a sort of a social call on her one of these fine days?'

Sean Lavelle hesitated, for he knew his plan had failed. His explanation sounded rather lame: 'Sure, I was only trying to save time—and expense. Especially as I had the hire of the car that brought us the twenty-mile journey charged up to yourself. That's why I suggested Jane might as well come over with me this morning, so's we could discuss the future of the pair of you, on the spot.'

'What gibberish are you talking at all?' Malone gaped at his visitor. 'There's no future—that I can foresee—to be discussed with your cousin. Not even—er—mentioned.'

'Ah, the poor old fellow!' Lavelle stood up pointedly, aware that it would be foolish to

prolong the interview. 'The old man is creeping down on you, Thady. You haven't even the spunk of a mouse, when you get down to brass tacks.'

'There's a lot of them tacks have the wrong ends jutting up, Sean. Isn't that a good demonstration for you now? Where did you say that young woman was?'

'In the taxi that's ticking, to your account, below at the crossroads. Maybe I'd better go down, and tell her the nerve failed you, when you realised that you should be nursing your rheumatics, instead of trying for a free housekeeper?'

Thady sat awhile nodding to himself. 'Yes, I'll even allow myself to be slandered, to provide a gentle let-down for that young woman. Tell her I felt so unworthy of her charms that I daren't disillusion her as to the unappreciative husband I'd make for a wife who'd combine beauty with modesty, and charm with cookery of a standard that'd decide Mrs Beeton to take lessons in—what do they call it now?—kitchen-craft.'

In the doorway Sean Lavelle turned and flung back: 'Ah, you think you're clever, don't you? Well, you're only an expert in the phraseology of codology. I suppose if the naked truth was known, 'twas a happy release for poor Anastasia. Good-day to you now.'

'And a very good-day to yourself, Sean.' Thady Malone leant against the door-jamb, shaking his fist after the man who was retreating quickly down the boreen. 'You crafty old customer,' he chuckled. 'You thought you'd palm off one of your impecunious relations on me, did you? Aye, one with a tongue that they say is sharper than her wits. I'm thinking I had a narrow escape from being hitched up with a—a platitude blonde. Ha, ha . . .'

Reflection

*Purple on white cold sky, and hills
Half-trapped in snow.
Purple on white, with seam of gold—
First crocus glow.*

*Green in the ground new breeding life
Where warm roots cling.
Green in the mind the memory
Of nearing Spring.*

HAZEL TOWNSON.

Organ-Pipes Are Almost Human

CLIFTON E. WILLIAMSON

STILL surviving among the ever-diminishing number of crafts in this age of mechanisation is the little-known but fascinating one of organ-pipe making and voicing. Probably we have all at some time listened spellbound to one of the great organs, such as that in the Royal Albert Hall, and have gazed up, perhaps a little nervously, at those enormous pipes towering high above the organist. Few people realise that tucked away in the dark interior are literally thousands of pipes, all handmade, which, unlike the Victorian child, are heard but not seen. These pipes range from ponderous giants, 32 feet long, to shrill top-notes less than a $\frac{1}{2}$ inch in length.

In a picturesque Essex village, surrounded by trees and birds, is a workshop where craftsmen fashion these pipes—men who love their craft, and whose finished products are to be found in many cathedrals and churches throughout the world.

THE methods the organ-pipe makers employ are those which have been handed down unchanged from father to son for generation after generation. No machines whirl and hum in this factory, but instead there is to be heard the rhythmic tap, tap, tap of wooden beaters wielded deftly by expert hands, coaxing sheets of organ-metal round mandrels of various shapes till they assume the required forms.

When I visited the workshop I was first introduced to Old Bill, a short, bent figure, clad in white apron and cloth cap, with fifty years' experience to his credit. He told me that organ-metal consists of an alloy of tin, lead, and antimony—the same mixture as that of printer's type metal. The proportions of each constituent are varied according to the quality desired, a high tin-content resulting in a hard and durable metal. By far the

greatest number of pipes are constructed of this plain-metal, as it is called, though for reasons of economy the larger specimens are often made of zinc or pine. The wooden pipes, although rectangular in section, produce tones as smooth and round as those of their cylindrical brothers.

Casting the metal sheets appears to the layman to be a somewhat hazardous operation likely to result in scorched trouser-legs and shoes, if nothing worse. However, Old Bill, who 'runs the sheets', humorously asserted that after half-a-century's service *his* trousers were as good as new! 'There's nothing to it if your temperature's right,' he said, taking a ladleful of molten metal from the silvery mass and allowing it to pour slowly back again into the skillet. The skillet, which is filled with metal from the furnace, resembles a thick iron preserving-pan, holding 56 pounds of material, having pivots at the sides near the top, which allow the vessel to be tilted forward by a handle at the back so that the contents may be run out.

Old Bill continued his dipping and pouring without pause, peering intently at the flowing metal as though seeking some subtle change in its appearance. 'Right!' he shouted all of a sudden, slinging his ladle into a corner. Apparently his temperature was correct.

While I watched from a safe distance, he poured the skilful of metal into a box having a narrow slit running full length along the bottom edge, the whole contrivance being the same width as the casting bench across which it rested. The bench is merely a flat and level fustian-covered stone table 15 feet long. This done, he and his assistant strode with slow but steadfast steps along the bench, one on either side, sliding the heavy box, or gauge, of molten metal along between them. The gauge deposited through the slit a shining

CHAMBERS'S JOURNAL

ribbon of metal $2\frac{1}{2}$ feet wide and 15 feet long.

Obviously Old Bill's temperature *had* been right, for the molten stream solidified immediately it left the gauge and stayed on the bench instead of cascading to the floor as I had feared. No thermometer had been used during the operation: indeed, Old Bill would scorn to use such 'newfangled gadgets'. He relies entirely upon his expert eyes to tell him when the metal has fallen to the precise temperature-level at which alone the sheet can be successfully cast. An error of a few seconds in timing would spell failure, for if the metal were too cold it would refuse to run through the narrow gauge slit, whereas if it were a degree or so too hot Bill's trousers—and reputation—would be ruined for good and all.

When cool enough to handle, the sheet is rolled up like linoleum and another sheet is cast. This may be made thicker or thinner by regulating the aperture in the gauge.

ARRIVING at the 'making shop', I was confronted by a bewildering array of pipes of all shapes and sizes, and in all stages of construction. There were long slim pipes, short tubby pipes, pipes leaning against walls, and others hanging from racks. Some had bodies but no feet, others there were with bodies and feet but no ears, while yet more waited patiently for their boots! Yes, organ-pipes do have bodies, feet, ears, mouths, lips, tongues, beards, and boots. Indeed, it would appear that they are almost human: at times—or so I was later told by the voicer—they could not be more exacting in their requirements even if they *were* human.

In the making shop Old Bill's metal sheets were cut to the correct shape and size, and were persuaded to take on not only the form so familiar to everyone, but also strange fantastic contours which few folk would believe to be organ-pipes at all. These ugly ducklings, or reed-pipes, are invariably situated inside the organ to which they belong, and produce those imitative tones representing orchestral instruments—for example, the trumpet, clarinet, oboe, tuba, etc., and some

even simulate the human voice more or less successfully.

Having skilfully rolled the sheet metal into cylindrical bodies and tapered feet, the workman solders the edges together. This is another task calling for nice judgment and a delicate touch, for, as the material to be united melts at much the same heat as the solder itself, it is a simple matter to work havoc with Old Bill's sheets. These men, however, run a seam 8 feet long quite flawlessly, and with apparent ease. Ears are added, one on each side of the mouth, attached partly to the body and partly to the foot, which, to say the least, is an unusual position for ears, but then organ-pipes *are* unusual!

DESPITE the possession of feet and boots, the completed pipes have now to be carried to the 'voicing room', in which is a skeleton organ or voicing machine, upon which they are tested for correct tone, after the voicer has made certain delicate adjustments, and, in the case of reed-pipes, provided them with brass tongues. He opens the mouths, provides teeth and fits beards, so that the pipes may speak, for without this attention they would maintain a sulky silence—which is understandable as far as mouth and teeth are concerned, but the beard's function in this connection seems a little obscure. However, I was assured that the beard, or little wooden roller fitted between the ears, is absolutely necessary to obtain correct speech from certain pipes.

If the men who make pipes are craftsmen—as most certainly they are—the man who voices them is the artist. With no scientific aids of any sort, no standard tones for purposes of comparison, but relying solely upon his discerning ear and long experience, he creates the whole gamut of tone-colours ranging from the whispering notes of the sweet dulciana stop, through liquid flute tones, to the all-powerful tuba. Indeed it may truly be said that he creates the soul of the organ, for without his art the mighty organ, 'King of Instruments', would perforce remain silent and dead.



Rain Sacrifice

CHARLES C. TALLACK

I WENT to India forty years ago, when to mix intimately with the Indians was looked upon askance by the European community. I ignored this, gained the friendship of many Indians, and saw and learned much.

Outstanding amongst my Indian friends was Moti Lal, a Bengali deeply interested in his country's lore. With his help I sometimes stained my skin and disguised myself as a Hindu that I might pass barriers otherwise closed to me. With him I had many strange adventures. This is an account of one.

THE rains had failed and the paddy-fields were bare. The villagers were low-spirited and sullen. Frantic prayers welled up to heaven, and everywhere the shrines to the many gods were stained and dripping with the blood of sacrificed goats.

Moti Lal came to me asking if to-morrow I would go with him to see a great sacrifice to Tari Pennu, the earth goddess, that she would vouchsafe rain. Certainly I would go! I would have gone on my hands and knees for the privilege, though what I should see I did not know.

I was a Hindu, dressed in the usual white dhoti of Bengal and chewing betel-nut, when we set off in a bullock-cart next day at noon,

and after five hours of that most uncomfortable mode of travel we arrived at the village of Talpukhur before sunset.

Moti Lal chatted with a group of villagers, and soon we started off with them, through dried-up paddy-fields, to a parkland studded with palas-trees, whose crimson flowers, blazing in the rays of the setting sun, proclaimed how aptly they are sometimes called 'forest flames'.

Twilight gave way to night. There was no moon and the bright stars were our only lamps. Three hours or more we must have walked, when we reached a grove of sal-trees, from the depths of which came the roar of voices, which even at this distance sounded charged with wild depravity.

We pressed on towards the sound and were soon in a clearing where men and women, drunk with some ghastly and obscene excitement, swarmed and danced and milled. There were shrieks, wild music from conch-shells and drums, a terrible and uncanny restlessness, but no laughter.

THE only light upon the turbulent scene was from three wood-fires, which cast weird shadows as they flared up and flickered low. Everything was indistinct and looked unreal

CHAMBERS'S JOURNAL

amongst these shadows, but near the centre fire, which blazed brightly and steadily for a while, I saw, with great distinctness, a boy in a white dhoti, with a crimson caste-mark on his forehead. He was tied to a tree and two priests were anointing him with ghi and turmeric, and people from the crowd were rushing up with garlands of jasmine and frangipani flowers to drape over his head and shoulders. The horrible music and revolting shouting of the frenzied mob rose and fell and stifled thought.

The boy moved his hands upwards as though in supplication. Suddenly my brain cleared. A monstrous thought struck terror in my heart. Was I about to witness a human sacrifice? I knew such things happened long ago, but not now. Please God, not now!

But what else could all this mean? The boy was being anointed and garlanded just as is a sacrificial goat, and the surging throng was in the grip of a grim and bestial urge that no ordinary sacrifice could arouse.

Moti Lal was, with rapt attention, gazing at the group near the central fire, where ever and anon the fitful flames lit up the form of the pitiful boy who was to die to please the angry goddess.

Yes, there was no doubt now in my mind as to what was to happen. But what could I do? It would be useless, or worse, for me to try to save the boy. I could not force my way through this seething mob of zealots, and any interference or protest would be of no avail with men in such a mood. Nor could I fight my way back from this terrible arena through the ever-increasing crowd, whose ghoulish shrieks, accompanied by the soul-corrupting music, grew ever louder and more intense. Dreadful though it was, I must witness this ghastly rite. I wished that I might faint, but was kept alert by a horrible excitement.

A quick movement by one of the priests and I saw him—horror of horrors—wield an axe. An unearthly roar went up from the crowd as the death-blow was struck. This much I saw before a horde of devotees

crowded round and hid the scene from my eyes.

Something of what happened then I guessed when men forced their way back through the throng with pieces of flesh, dripping blood, in their hands. I learned later that these would be buried in the fields to ensure fertility.

Nausea held me motionless for a while. Shudder after shudder passed down my spine when I realised that nothing could undo the horrid deed that I had seen nor wipe it from my memory.

I LOOKED for Moti Lal, but could not see him. I crept away from the scene, through the rapidly-thinning and now silent crowd, to the path at the edge of the clearing where we had entered. There I waited, alone with my dreadful thoughts.

When Moti Lal joined me, I was shocked by his jaunty manner. Had I enjoyed the ceremony? Then he saw how broken I was and hastened to tell me that the 'boy' I had seen was really a sheep, shaved of its wool and made up to look like a young boy. The ceremony had been a counterfeit of the old meriah (human sacrifice), long since banned, for which the votive-offering was a young boy or maid. Moti Lal had not told me earlier lest I should find the ceremony less thrilling!

It would be in keeping if I could tell you how we were drenched in a tremendous downpour on the way home, but, alas, it would not be true. In spite of all, only scant rain fell that year and famine followed, bringing such misery as made one more tolerant of the earnest but misguided efforts the villagers had made to avert it.

Since then several sacrificial murders have been proved in the Indian courts. My Indian friends gossip from time to time of maidens sacrificed in river-beds when the rains from the hills have failed to fill them. Is it strange that I sometimes wonder fearfully what I really saw that night?

The Clock

*Against the wall the old clock stands
And watches us as we embrace,
With every kiss its creeping hands
Shift slowly round its vacant face.*

*Those spiteful hands like cruel shears
Lop off the minutes we so prize,
But in our hearts adown the years
Is held a hint of paradise.*

T. STEPHANIDES.

Science at Your Service

AN INTERIOR PAINT

PRODUCED by one of the oldest-established of British paint companies, an interior paint based upon a synthetic pigment and formulated as an emulsion is specially suitable for decorating offices, cinemas, restaurants, or private houses when speed is essential and when the odour of paints or distempers would be undesirable. The paint dries so quickly that two coats may be applied to most surfaces in the same working-day. It is superior to washable water-paints and cheaper to apply than orthodox paints and enamels. It gives a tough, durable film, flows well on the brush, and leaves no brush-marks or, as has been said, residual odour. It can be applied to a wide range of surfaces—e.g. to plaster, concrete, breeze-blocks, asbestos-cement, brick-work, wallboard, etc. A well-detailed brochure on this type of paint is available. The paint is made in a variety of colours and tints, and the range of colours possible is further widened because all the standard tints are intermixable. It can be spray-applied as well as brush-applied.

A SWITCHING-OFF ELECTRIC-KETTLE

An electric-kettle that switches itself off after the water in it has reached boiling-point is now on the market. The switching-off device is controlled by the heat in the vapour. As the kettle automatically switches off, a high loading-element can be used, with the result that faster boiling than is usual with electric-kettles is attained. It is stated that two pints of water can be boiled in about four minutes. The maximum capacity of the kettle is $3\frac{1}{2}$ pints, but a minimum quantity of just over 1 pint may be boiled. An indicator in the handle shows when the kettle has switched itself off, and this needs only to be pushed down again to switch the kettle on anew. There is a safety-device to protect the element against damage if switched on dry. The kettle is made of copper, with inside tinning and a chrome finish; the handle is moulded.

BETTER DIVIDER MEASURING

Users of dividers for measuring lengths accurately will be considerably helped by a new instrument for setting them. One leg of the divider is placed in a movable centre-point attached to a vernier scale; the other leg is then placed in a suitable point along a 6-inch rule which projects from the circular vernier scale. The final setting is now obtained by tightening the adjustment-screw of the divider; this causes movement at the movable leg-point, and the vernier scale reading indicates the actual setting at any time, with an accuracy of $1/1000$ th of an inch. The desired setting is reached, of course, when the vernier scale shows the distance required. The vernier scale is silver-plated to ensure maximum clarity, and the adjoining rule with its 24 regularly-placed pin-points is finished in hard chrome plate with a non-scratch surface. The main finish of the instrument, which is supplied in a plastics-leather case, is black crackle enamel.

SOUND-WAVE WASHING

The dirt-removing properties of sound-waves are now fairly well known. A new household appliance brings sound vibrations to the help of the home wash. The vibrating machine is of compact size and, inserted into the sink or whatever vessel is being used for the wash, it produces 6000 vibrations per minute; these vibrations take the place of the hand-rubbing and normal physical operations that assist soapy water to extract dirt from fabrics, and the dirt removal is accomplished without any risk at all of damage to garments. Soapy water or water to which any ordinary detergent or washing-powder has been added may be used. A sink wash will take from 10 to 30 minutes. The appliance is suitable for A.C. power supply only, and it must be used with earthed plugs and sockets. It weighs 7 pounds and has a height of 10 inches and a maximum diameter of $8\frac{1}{2}$ inches. However, it is not cumbersome for handling, for it is simply connected, switched on, and inserted into the washing-water so that the entire metal body is submerged.

CHAMBERS'S JOURNAL

SELF-LIGHTING CARS

The problem of lighting-up is one of the obstinate headaches of motoring. Time-switches have been devised, but they have been somewhat cumbersome, often very costly, and none has also provided automatic switching-off. Now a quite small light-sensitive switch unit that can be housed behind a corner of the windscreen will switch on car lights as dusk falls and switch the lights off again at dawn. The latter feature is, of course, of enormous importance when a car has to be parked outside all night.

The new device contains no moving-parts other than the automatic switch itself, no batteries, valves, or clockwork mechanism; the eye of the switch faces the windscreen and light falling upon it operates the switch by the effect upon its photo-voltaic cell. Although only about one ten-millionth of a watt is produced, this is sufficient without amplification to effect switch-control. When the lights have been switched on, however, a small amount of current is drawn from the car battery, about one-sixth of the amount taken by a single rear-light bulb.

The sensitivity of this device is certainly remarkable. The ratio of light-intensity of full sunlight to full moon conditions is about 500,000 to 1; yet this automatic daylight-sensitive switch is brought into play only when light-intensity passes through the level that obtains a few minutes before lighting-up time. This might suggest that the effectiveness of the switch will be affected by artificial lighting near a parking site or, more dangerously, by the light from an oncoming car's headlamps. In fact, light-intensity at twilight is many times stronger than that of the most brilliant street-lighting. However, the effect of a focused beam of strong artificial light falling upon the eye of the automatic switch might be undesirable; any risk from this cause has been removed by making the switching-off level of light appreciably higher than the level of light needed to switch the lights on. This means that at dawn the lights go out a few minutes later than they need legally, although at dusk they are switched on more closely to lighting-up time.

The switch will, of course, operate when premature darkness arrives—e.g. in fogs, tunnels, etc. If no lighting is needed during darkness e.g. in a garage, the switching-off of the lights in the normal manner will place the device out of operation.

The switch is compactly contained in a dove-grey plastics case, 4½ by 2½ by 1½ inches in dimensions, and is provided with an adjustable fixing-bracket to fit any dashboard. Models are available for both positive-earthed and negative-earthed cars. Full installation and wiring instructions are given, and there is a twelve months' guarantee against faulty material or workmanship.

A MODERN COAL-SCUTTLE

A new coal-scuttle or coal-box has as its main feature an internal perforated shelf that enables very small coal and dust to fall through into a separate bottom section. A sliding-door entry to the bottom section enables this to be used as a regular source of the smaller material that is needed for banking up continuous-burning fires, which have these days come into such frequent use. The top section or shelf, access to which is made by lifting the lid, is placed at an angle that enables a shovel to be used for obtaining the lump coal. Tongs are not, therefore, necessary. The two sections and the perforated shelf comprise an internal liner-container that can be removed from the box for filling; it has a stout handle suitably placed to prevent dust-tipping during carrying. The box is of all-metal construction and is offered in various finishes—oxidised copper, mottled grey, beige, or silver grey. The lid is reinforced so that it can stand being used as a seat; there is a pocket at the rear to hold a shovel.

NYLON SCREWS

Nylon has entered yet another field—the metallic field of screws. One of the leading companies producing screws of all kinds has recently introduced moulded nylon screws with slotted heads. The merits claimed for nylon in this unusual role are high mechanical strength and resistance to abrasion, and also non-conductivity, which makes the screws of special interest to the electronics industry. The tensile strength of nylon increases with falling temperature, but even at normal room temperatures it is 5 tons per square inch. Nylon is rather more elastic than mild steel, however, and careful driving-in of the screw is necessary, whether by power or by hand. The prices quoted seem reasonable; if nylon is a dearer constructional material, much of this disadvantage is offset by the fact that standard sizes can be moulded.

SCIENCE AT YOUR SERVICE

A SHOP-WINDOW DEMISTER

A simple system for obviating mist formation on shop-windows is based upon a plastics-covered cable which becomes warm but not hot when current flows through it. This flexible cable, about half the thickness of an ordinary pencil, can be unobtrusively fastened along the bottom of the window. The plastics covering is, of course, effectively insulating, and it is also flameproof. The cable can be connected to either A.C. or D.C. supply. There are two types, for 200-220 and 230-250 voltages; each type takes only 120 watts, consuming no more than 3 units a day if left running continuously. A year's guarantee is given by the makers. The price is moderate.

EASIER TELEPHONING

An electronic amplifier for telephones has eliminated the need to hold the receiver during conversation. This leaves a busy office worker or executive with both hands free during a call; and, perhaps more important still in commercial life, it cuts out the irritation and time-wastage so often caused by having to hold on while the required person is found.

The amplifier is a self-contained instrument, not an attachment to the telephone-receiver. It stands on a desk, and is operated either by battery or by A.C. 230-250 volts. When making a call, the receiver is placed on to the amplifier, with the listening-cup resting in a circular aperture at the top of the amplifier. Any conversation received is then relayed through the amplifier. To speak in such a telephone conversation there is no need to pick up the receiver; by speaking towards a bowl-shaped inset in the front of the amplifier the sound is transmitted just as if speech had been made into the normal speaking-cup of the receiver.

All persons in a room or office can, of course, hear the whole of a telephone conversation when the amplifier is in use. This is often advantageous—e.g. during meetings; however, when privacy is desirable, this can be secured by using the receiver normally.

TO CORRESPONDENTS who wish fuller information regarding new inventions, publications, etc. mentioned here, addresses will be furnished, when possible, if (and only if) a stamped addressed envelope or postcard for a reply be sent to the Editor, *Chambers's Journal*, 11 Thistle Street, Edinburgh. To avoid delays, requests of this kind from correspondents abroad will be forwarded to the manufacturer or agent if stamps, postal orders, or imperial or international reply coupons are enclosed for the purpose. The issue of the *Journal* and the heading of the paragraph in which the object of inquiry is described should be given in order to facilitate reference.

The amplifier can be used for both external and internal telephone systems.

There is only one control on the amplifier—volume control similar to that on radioloudspeaker extensions. In very noisy offices, such as those in busy engineering factories, an external loudspeaker can be attached to the amplifier to increase the volume-enlargement still more.

A secondary feature of this method of using the normal telephone in offices is that it is far more hygienic. With receivers that are used by several people, the transmission of cold or influenza infections is lessened, for the receiver is not directly spoken into.

A NEW VITAMIN C SOURCE

The richest source of vitamin C yet known is claimed to be a wild cherry that has been native to Puerto Rico for hundreds of years. The high vitamin C content of acerola cherry juice was first revealed in 1946. Samples of juice contained 80 times as much vitamin C as in orange juice, 30 times as much as in blackcurrant juice, and perhaps 10 times as much as in rose-hip extracts. It has taken a long time, however, to develop successfully the cultivation of this wild cherry; its main problem was poor germination. Enough non-wild growing of the bushy acerola tree has now been started in Puerto Rico, however, for the juice to be commercially canned. The intention at present is to use it for blending with other fruit juices—e.g. apple, pineapple, tomato, etc.—to increase their relatively low contents of vitamin C. In Puerto Rico itself schoolteachers have been instructed to give each child two acerola cherries a day—the trees have been planted in every school-yard. Perhaps the most interesting aspect of this item is that it prompts speculation whether there are other wild fruits or vegetables in the world that are still undiscovered as rich sources of this important vitamin. The lemon and the lime, whose juice was found to cure scurvy among sailors generations before vitamins had been isolated, are fairly poor sources compared with those we have developed in this century.

March Tasks

MARCH is a most important month in the garden. Nothing should be missed, and in order to help gardeners ensure that every job possible is carried out I am giving this month quite a list of operations which should be put in hand. No one, I hope, will object to being reminded.

If you live in the South, the parsnips, onions, early peas, and broad beans should be in. In fact, they might even be showing by now. Perhaps the weather has prevented you getting these crops in. If so, sow the seed as soon as possible. Kale, sprouting broccoli, and globe beet should go in now, and towards the end of the month sow parsley and savoys in a seedbed. Main-crop leeks can be sown and raised out of doors in a seedbed which has been enriched well with sedge-peat. About the middle of the month put in a good marrow-fat variety of peas. Continue the sowings of lettuce and radish so as to give continuity, and also sow the turnips and main-crop carrots.

There is, of course, planting to consider. Subject to the right weather, you should be able this month to get in some early potatoes. Protect them from the frost, when they come through, by earthing them up. You will find your continuous cloches ideal for giving the right coverage as well as the ensured earliness. Order the asparagus crowns, for, although they will not be planted until April, they will be much in demand this year, and an early order will ensure your getting what you require. Divide the chives early in the month. It is always better to replant a proportion of the clumps each year.

Now let us turn to the flower garden. It is not too late to plant deciduous shrubs. Plan ahead and try to work out a scheme of a permanent plant with fillers which will be removed in five or six years when the permanent plants want the room. This will ensure that the border looks well from the start, and yet it will never be overcrowded. Avoid digging in manure before planting, as this makes it difficult to get the trees in firmly, but put the manure or compost on as a surface mulch afterwards. If you leave a little saucer-shaped depression around each shrub, so that

all moisture gravitates there, you can then do the necessary overhead syringing and watering with a hose and thus make certain that the shrubs are watered properly.

Put the necessary stakes in position before planting, or, alternatively, drive them in at an angle of 45 degrees so that the pointed end of the stake is well away from the roots, to avoid disturbing them. Shrubs that are normally spring-pruned should be cut before planting.

At this time of the year the soil often tends to pan. In this case hoe lightly, with a pronged hoe if possible, so as to allow the roots of the shrub to breathe. Prune the late-flowering shrubs about the middle of the month, for these flower on the wood made during the current year. There are two methods of pruning the rugosa roses and their hybrids. Either cut them down almost to the ground, in which case they will bloom late, or form a good bush by retaining and cutting at 4 feet the best of the suckers thrown up from the base the previous year.

If you have not managed to replant your herbaceous border so far, you should lift and divide certain clumps this month to remove pernicious weeds such as couch and ground elder, which will be apparent by now. The shallow-rooting perennials like phloxes will require a top-dressing of sedge-peat at the rate of half-a-bucketful to the square yard, plus a fish fertiliser at 3 oz. to the square yard. Lime lovers like gypsophila and caucasian scabious will need an application of lime at from 6 to 7 oz. to the square yard.

If the soil is in the right condition, prepare your annual border, mark out where you are going to have your drifts, and sow such informal annuals as larkspurs, *Bartonia aurea*, *Phacelia campanularia*, *Salpiglossis sinuata*, *Dimorphotheca aurantiaca*, and *Nemophila menziesii*. In the greenhouse, sow seeds of *Salvia patens*, and also a further batch of half-hardy annuals.

I shall be glad to help readers with their gardening problems. Write to me through the Editor, kindly enclosing a stamped addressed envelope for the reply.

W. E. SHEWELL-COOPER., M.B.E., N.D.H.

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